Clinical Lecture
ON
OVARIOTOMY.

Delivered in University College Hospital,

BY CHRISTOPHER HEATH, F.R.C.S.,
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YOU know, gentlemen, that I have lately had here under my care a patient who was sent up to me from the country with the ordinary form of dropsy connected with the ovary—namely, dilatation of the cysts which form the natural structure of the ovary. When she was admitted on Feb. 16th she had an enormous abdomen, as you will remember. Although she was only thirty-one years of age, she looked a good deal older. She was somewhat sallow, but otherwise she seemed in very good health. The history of the case was that she had had one child, and her abdomen had been getting steadily larger for nearly a twelvemonth. You will remember that we went into the diagnosis at the bedside, and we found that there was very distinct fluctuation over the greater part of the swelling, that there was a dull note over the central portion where the tumour existed, and that there was a clear percussion note on the right side, but one not so clear on the left side. The left side was somewhat dull, and I ventured to predict that we should find that the tumour had formed a secondary cyst, or more cysts, in the left region, and so it afterwards proved. The fluctuation was so very distinct that it might almost have been thought to be a case of ascites as regards the wave of fluid, but of course the fact that the dulness was in the centre and the clear note at the side negatived that. The only other thing that it might possibly have been was one of those exceedingly thin cysts which we find connected with the broad ligament, which are sometimes no doubt parovarian, and therefore correctly called parovarian cysts, but are better called cysts of the broad ligament; still the size negatived that. You never see a parovarian cyst or a cyst of the broad ligament so large, and I had no doubt that it was a true ovarian cyst. I got Dr. Williams to see the patient, and he quite agreed with me in the diagnosis. The only question, then, was as to when and where the operation should be done. It so happened that the room in which we are in the habit of doing ovarian operations in this hospital, most of which fall into the hands of Dr. Williams, was occupied at the time, and I did not like to leave the patient unrelieved with such an enormous abdomen, because there is a risk in such cases that some cyst might give way accidentally and a quantity of fluid be poured into the peritoneum, and possibly a fatal result ensue. You will remember that a day or two after her admission, therefore, I tapped her in the median line with a large aspirator-needle—one of the largest size—and drew off slowly thirty-one pints and six ounces of thickish fluid. If you work that out, you will see that it is very nearly four gallons, and that will give you an idea of the size of the large cyst which was tapped. It was one cyst only that was tapped; the other cysts, which we found subsequently, of course not being interfered with by the trocar.

One word with regard to the question of tapping. You will find that there are differences of opinion amongst authorities as to the advisability of tapping. No doubt in this case it was advisable, because we wanted to give relief and tide the patient over a few days longer; but if that were not the case, would it or would it not be wise to tap the patient before operation? I think the general opinion is that it is better not to tap. You will certainly have a little risk in tapping; you might let out a little fluid into the peritoneum, and possibly set up a certain amount of peritonitis, and in that way get adhesions. Again, it is possible that you might disseminate a little portion of some growth out of the cyst itself into the cavity of the peritoneum. Therefore I think you will find that the majority of authorities say that it is better, save in exceptional cases, not to tap. But this was just one of the exceptional cases where it was well to tap, and I do not think it did the patient any harm.

Now to come to the operation of ovariotomy, which I performed upstairs in the isolated room on March 9th. The patient, you will remember, had a perfectly uninterrupted recovery. She was removed downstairs the week afterwards into my wards again, and I then took out all the stitches, and she is now fairly convalescent, and only requires a little time for the weather to moderate to go home. Then came the question whether the operation should be done with strict antiseptic precautions or not. It certainly was done with strict antiseptic precautions as regards everything we could do to render our hands, our instruments, and sponges aseptic, but it was not done with a spray. There was a spray ready, and those who were present may remember that I declined to use it, but I allowed it to play away in the room. There can be no objection to that, because it keeps the air of the room sweet, but there is a very great practical objection to having the patient covered with spray at the time of the operation. If you allow the peritoneum to be sprayed upon, undoubtedly you get a certain amount of fluid into it, which is undesirable; and, still more, the spray has a great cooling effect upon the intestines, which is certainly objectionable, for it lowers the patient's vitality, and is apt to produce shock. I think, too, it is better to avoid the possibility of a considerable quantity of carbolic acid being absorbed by the peritoneum. You will remember that the peritoneum does absorb extremely readily, and if you have a spray of 1 in 40 carbolic thrown over it, it is conceivable that you might get more carbolic acid absorbed than is good for the patient. Let me finish this question of using the spray by quoting a few sentences from a lecture given the other day at the College of Surgeons by Mr. Cheyne, who is a great authority, as you probably know, upon antiseptics. I quite agree with him when he says: "In former times the peritoneal cavity was looked upon as one especially liable to inflame, and it was thought to be one of the triumphs of antiseptic surgery that operations could be performed on the peritoneum without bad result. The experience of a number of surgeons has, however, now shown that it is not absolutely necessary for success in operations on the peritoneum that all bacteria should be excluded from the cavity; in fact, this seems to be much less necessary than where operations are performed on other serous cavities, such as joints, or on the subcutaneous or muscular tissues. The explanation of this surprising result is found in the nature of the lining wall of the cavity, and in the conditions under which pyogenic organisms find themselves there. The peritoneum has marvellous powers of absorbing fluids, and thus effusions into it are very rapidly removed, and in this way micro-organisms are deprived of the necessary nutrient material, while they are also, in all probability, absorbed along with the fluid and destroyed in the blood, or excreted." Then, in another part, he says: "It is evident, therefore, that when authors draw conclusions to the effect that aseptic treatment is unnecessary in surgical practice because they obtain good results in operations on the peritoneum without it, when they take care to introduce as few of these organisms as possible (in many cases probably none at all are allowed to enter), to introduce them in as dilute a state as possible, to remove all the fluid and other materials, such as blood-clot, in which they can grow, and to avoid injury to the peritoneum as far as they can, they make an assumption which is not at all in accord with other clinical and experimental observations. The points which I have mentioned amply explain the results, and bring them into unison with those of experiments and of clinical experience with regard to other tissues of the body." I do not for a moment say that we did the operation without aseptics: we did use aseptics, but the point that I want you to understand is that I purposely did not use the spray, and I think the result shows that it was not necessary. There are many surgeons who still use the spray for peritoneal operations, but I think that those cases which you have seen of other peritoneal operations where the spray was not used, such as gunshot injuries, and others which Mr. Barker has recently had under his care, most of which have been very successful, show that a spray is not necessary in operations upon the peritoneum, but had perhaps better be avoided.

Then as to the steps of the operation. Those who were present will remember that I simply made an incision three inches long; that I exposed the sac by dividing the peritoneum upon a director, and that the sac immediately came into view—a bluish-looking thin membrane, which is its ordinary condition. There was no peritoneal fluid, and the cyst was at once exposed. I put my hand in and broke down some slight adhesions; and then, as you will remember, I tapped the cyst at once with Wells's trocar. I first tapped the large cyst, which was of course the original cyst which had gradually been refilling, and then I found other secondary cysts, one of which I tapped again. I also found at the back part, as I expected, some almost solid material, and I thought it better to enlarge my incision slightly, perhaps a couple of inches more, making it five inches altogether. I was then able to deliver the cyst, as we say, to draw it out of the peritoneal cavity, and expose the pedicle. In drawing it out, I found again a few slight adhesions, and you may remember that the omentum was adherent at one or two points. I tore those through and got to the pedicle. It was, as you see, a wide pedicle, formed, of course, by the broad ligament of the uterus, and you can see here on the cysts the end of the Fallopian tube. I transfixed the broad pedicle with an aneurysm needle carrying carbolised silk. I tied it at first in two portions, and then, cutting one ligature short, I used the other to put round the whole of the pedicle, and tied it again in one piece. It is a little important to bear in mind that it is not safe to tie a pedicle simply round as you would an artery. Never mind what the size of the pedicle is, you should transfix it and tie it in two halves by separate ligatures. That may be in a great many cases sufficient, but then it is just possible that there might be a vessel in the middle which might have been transfixed by your needle or torn by the ligatures. It is therefore safer, though it is not essential, to take one of the ligatures and bring it round again behind the point where it has been tied before, so as to enclose the whole of the pedicle again. You will find that some operators lay a good deal of stress on looping one ligature into the other; they say it is not safe to tie the two halves separately, but that you should slip one ligature into the other. I have not done it, and I do not think it necessary, and I have never had trouble in any way afterwards by the ligature. I then cut the ligature short and divided the pedicle with scissors. Then came the examination of the peritoneum and stopping one or two bleeding points in the omentum, which we tied with fine silk. Then the peritoneum was sponged carefully out and the abdomen closed.

Now, it is in closing the abdomen that Sir Spencer Wells made the great improvement. Previously to his first operations, now thirty years ago, it had always been laid down in surgical works that in any case of wound of the abdomen you should be careful, in putting in stitches, not to include the peritoneum. He found on a post-mortem examination of one of his early fatal cases of ovariotomy that, although the upper part of the wound had united, the two peritoneal surfaces were asunder and had not united, and that there was suppuration between them. He made a few experiments on rabbits, the results of which you may see in the College of Surgeons' museum; and he found that when he carried the needles through the peritoneum and brought the two surfaces together he had at once adhesion of the peritoneum, and the wounds united rapidly and well. Sir Spencer Wells at once published his results, and ever since that the rule of surgery has been reversed, and everyone now would at once put needles through the peritoneum and bring the two adjacent peritoneal surfaces close together. That is exactly what I did. I used a silk thread with a needle at each end, passed it from within through the abdominal wall, about half an inch from the edge, and put in five sutures, which I tied fairly tightly. Then I blew a little iodoform on the wound, put a pad of wool over, and plaster over that, to keep the parts quiet.

The patient made a perfectly good recovery. We have here the temperature table. I performed the operation on March 9th, in the morning. The temperature went up a little towards the evening; it was as high as 101° at 7 P.M., and it was 102·2° at 11 P.M. The next day it went even a little higher—102·4° and 102·8°; and at 3 o'clock it was at 103°. Then it gradually came down, and in two days it was at the normal, and there it continued until the patient left the separate ward. With regard to the temperature in these cases, it is said that if you use the spray you get a lower temperature than if you do not use it. I do not believe it for a moment. It is true that I did not use the spray here, and the temperature seems to have gone up a little, but I can show you in some old case-books of mine records of temperatures after ovariotomy illustrating this point. Here is the very first—that of a woman on whom I performed ovariotomy in 1870. The temperature is carefully recorded throughout, and it was as nearly a normal temperature as it could be, except on the evening of the operation, and then it was only 100·2°. It never went above 100·6°. And this was before the days of carbolic spray—practically before the use of antiseptics,—because we certainly took no precautions in those days to produce antiseptic results. We had cleanliness, but nothing more. I only want to illustrate the fact that a spray certainly does not keep down the temperature, and that the rise in temperature in this case was not due in any way to the want of spray. What it was due to I cannot say: it is one of those curious things which happen from time to time. It certainly did not mean any septic poison, because the patient made a perfectly good recovery.

So much for the case; now I want to say a few words with regard to the operation of ovariotomy. And first with regard to the circumstance that I and my surgical colleagues so seldom do it here. It is not our fault; it is our misfortune; we do not get the cases. The fact is that the gynæcological department see these cases much more frequently than we do, and Dr. John Williams does the operation so well himself that he does not call in his surgical colleagues to assist him. I am not particularly jealous of it; I am quite content that he should have his cases; but at the same time I should be sorry for it to be supposed that ovariotomy is not a strictly surgical proceeding. It is a surgical operation, and it was by surgeons really that ovariotomy was established. If you go into the history of ovariotomy, you will find it was first done by an American surgeon, Mr. McDowell. I have here a copy of "A Memorial Oration in honour of Ephraim McDowell, the Father of Ovariotomy," by Samuel D. Gross, M.D., the leading surgeon in America of his day. In 1879 there was a monument, of which I have here a photograph, set up to McDowell by the Kentucky State Medical Society, and after the manner of Americans they got Dr. Gross—a fine old surgeon—to make an elaborate speech (with which I will not trouble you) dedicating this monument to McDowell. Then, as a reward to Dr. Gross for having made the speech, they did an eccentric thing: they presented him with McDowell's knocker, which used to hang upon his door when in practice; and I have here a short speech made by a poor friend of mine, now dead—Dr. Cowling of Louisville,—in which he speaks in very high-flown terms of the different associations of this knocker with McDowell's practice. McDowell was, no doubt, the first to perform the operation, and it was occasionally done by different surgeons, the late Professor Lizars of Edinburgh being the first who did it in this country. In London it was done by one or two surgeons. Mr. Cæsar Hawkins was, I believe, the first who had a successful case in a London hospital a great many years ago. The late Mr. Baker Brown, I think, did the most at one time to bring ovariotomy into note, but he had no very great success. It was not until Sir Spencer Wells took it up in 1858 that the operation may be said to have been established. There were a few cases recorded, and they were mostly fatal, and it was not until after he had taken it up that the operation became an established thing.

Now let us see what was the precise operation in the early days. The abdomen was opened, not always in the middle line; I believe in the earlier operations the incision was made on one side. But certainly in the later operations the linea alba was incised, and then the tumour was removed without tapping. That is the great point, that when a large incision was made, sometimes from the ensiform cartilage to the pubes, and the whole mass of the tumour was dragged out, naturally a large quantity of intestines came out with it, and the only wonder is that any of these patients survived. The first great improvement was limiting the incision and tapping the cyst, reducing the bulk of the tumour, and so removing one great element of danger. Then came the question of the treatment of the pedicle. The first treatment of the pedicle was exceedingly simple. The surgeon tied it, and he left two large ends of thread hanging out of the lower end of the wound, and after a few days, if the patient lived so long, the ligature came away and was dragged out of the wound with a piece

of the pedicle in it. A few cases recovered even by that very rough method. But the first great improvement was the idea that it would be better to bring the pedicle outside, and I think that Mr. Jonathan Hutchinson is entitled to the credit of that. He thought that if the pedicle could be retained outside—I mean the cut end of it—we should avoid a considerable amount of risk of intra-peritoneal suppuration, and he advised what is called a clamp. I really had some difficulty in getting a clamp this morning to show you. The instrument is now so completely gone out of fashion that Mayer and Meltzer could not find a complete one; but here is the end of one, and you can easily imagine that it ought to have two handles. This is the original of Mr. Hutchinson's clamp, which was nothing more than a pair of callipers. The pedicle was put through and squeezed up as tightly as possible, and then the nut was screwed down. The handles were taken off for convenience; the wound was brought together, and the clamp was left outside the abdomen. There are various modifications of clamps. This was one of Sir Spencer Wells's last, I believe; but I think there is no clamp so good as this simple one, where the edges are parallel to each other and well serrated. Of course, the pedicle being outside the abdomen, any action on the end of the pedicle took place outside the peritoneum, and after a few days the pedicle got loose from the clamp. There was probably no hæmorrhage, the vessels being stopped by the ordinary process. Then the pedicle got retracted a little into the cicatrix, and became adherent there. That was one of the principal objections to the clamp—that the end of the pedicle, being entangled in the cicatrix, was left there, and sometimes remained raw and sore, and occasionally, not unfrequently I believe, it menstruated. The fact is, there was the end of the Fallopian tube included in the pedicle, and when menstruation took place on account of the other ovary you were apt to get a discharge of blood from it. Those who were not satisfied with the clamp tried to divide the pedicle with a cautery. Mr. Baker Brown, I believe, was the first who did it, and he did it rather extensively. I have here two of his cautery clamps. You will at once see how they were used. Supposing this towel to represent the pedicle, it was put through the clamp and the clamp was screwed up tight; in fact, it is very much like a magnified Smith's pile-clamp. These pieces of ivory protected the abdominal wall from injury. Then the cautery was worked against the metal bar, and the pedicle was cut through. Of course, if the cautery acted perfectly nothing could be better; but practically it was found—I found it myself—that when you came to let go the clamp you were apt to have a little bleeding, one or two vessels spouted, and then you were obliged to apply the cautery again or to pick up the vessels separately and put ligatures on. Then we had introduced into this country by the late Dr. Tyler Smith the suggestion that perhaps, after all, it would be better to tie the pedicle and cut the ligatures short, leaving the ends in the abdomen, and that is almost the universal practice in the present day. But it is right that it should be understood that it does not at all depend on the introduction of the Listerian method of treatment, because it was done long before that. I remember seeing Dr. Tyler Smith operate in 1868, long before Lister brought out his system, and then the pedicle was "tied and dropped," and the patient did perfectly well. Since the introduction of antiseptics Sir Spencer Wells has abandoned the clamp, and now drops all his pedicles in. In his book on the "Diagnosis and Surgical Treatment of Abdominal Tumours," I see that he takes more credit than I should for the antiseptic method. Other surgeons also think that his success during the last few years since 1878, when he began to drop the pedicle in and at the same time use antiseptics, has been due rather more to dropping the pedicle into the peritoneum than simply to the use of antiseptics. However that may be, here you have a case before you where the pedicle was dropped, where antiseptics were used but not the spray, and where the patient has done perfectly well.

Though I cannot speak of hundreds or thousands of cases like Sir Spencer Wells, I think it is right that I should give you the result of my own personal experience of the operation. I was attached for a time some years ago to the Hospital for Women at Soho-square. While there I had cases of ovariotomy—not very many. My first case was a very bad one, in 1870. There were two cysts of the broad ligament, and I used the clamp cautery. The patient died. The second case was a woman aged twenty-eight; there was a multilocular cyst, and I used the clamp. That was the only case in which I have ever used the clamp; and you will easily understand why. I used an ordinary clamp, and apparently everything had done well; but I was sent for some hours afterwards in a great hurry, and I found the patient pale and apparently moribund; the pedicle had slipped out of the clamp and disappeared into the abdomen, and the patient was apparently bleeding to death. I at once opened the incision in the lower part of the abdomen, got hold of the pedicle, and tied it. Unfortunately the patient had lost too much blood, and died some few hours afterwards. In the third case I tied and dropped the pedicle; but it was a case of cancer, and cases of cancer almost invariably do badly, and the patient died on the thirty-fourth day. One can hardly say that she died from ovariotomy, but she did not eventually recover, and she died really of cancer. With my fourth case I was more fortunate, the patient making a recovery; but it was a curious recovery, because a singular accident happened during the operation. It was the case of a woman aged thirty-seven, with very great adhesions, on whom an unsuccessful attempt at ovariotomy had previously been made. The woman came to me, and I thought that, on the whole, I might try and do what I could. I performed ovariotomy, and succeeded eventually in removing a cyst, and she got perfectly well. I will give you short notes of the case from the Clinical Society's Records. She was thirty-seven years of age, and the circumstances of the operation were these: "I found it necessary to enlarge the incision upwards, and this I did in the usual manner, raising the abdominal wall with two fingers passed beneath it, and cutting between them with blunt-pointed scissors. On completing the section an unusual appearance at the upper extremity of the incision attracted my attention, and I then found that a piece of small intestine, perfectly empty and adherent to the abdominal wall, had been divided in three-fourths of its circumference. An assistant grasping the ends of the divided bowel, I proceeded to complete the removal of the ovarian tumour, in which I encountered great difficulties owing to the firm adhesions both to the abdominal wall and deeply in the pelvis, and also to the intestines on the right side. The cyst was connected with the right ovary, and there was a broad pedicle, which I tied in two parts with hempen ligatures afterwards cut short, and the same plan was pursued with a long vascular band of adhesions. I now returned to the divided intestine, which I treated on the ordinary principles of surgery by establishing an artificial anus in the following manner." With that I need not trouble you. I made an artificial anus in the wound, and the patient made a complete recovery. I was able to close the artificial anus to a certain extent, but there always was a little fistula left through which a little biliary fluid discharged, otherwise the patient completely recovered. Now, let me say at once that a wound of the intestine is one of those things that may happen, and I believe has happened, in ovariotomy both before and since my case. I see Sir Spencer Wells mentions having had a case subsequent to this, in which he found that he had torn the intestine; and he had to remove a piece of the intestine, and afterwards united the two portions together by sutures—what we now call the Lembert suture. The patient died, not apparently from anything to do with the intestine; for at the necropsy it was found that the intestine was watertight. In my case I did not venture to do that. I brought the two ends out and made an artificial anus, and I think that, on the whole, it was best for the patient.

To go on with my list, in which there now come some successes. There was a woman aged thirty-seven who recovered—that is the case I have just mentioned; and then there was a woman of thirty-six who recovered; and then there was a woman of thirty with a multilocular tumour simulating uterine tumour—indeed, it was so like a tumour of the uterus that when I opened the abdomen I was in doubt what I should find; it was a multilocular ovarian tumour, and the patient recovered. The next case was a woman of forty-nine, from whom I removed both ovaries with cautery, and she recovered. The next case was an unfortunate one—a woman of forty, with cancer of both ovaries. I removed one with cautery and the other with a ligature; but she died. Then I had a young woman of nineteen with a cyst of the broad ligament. Perhaps I ought to have enucleated that cyst, but it was not done in

those days—I am speaking of 1872; I removed the cyst therefore with the ovary, and she got perfectly well. Then in 1873 I had two cases, both of which I treated with cautery, and both recovered. There were eleven cases altogether that I had in the Hospital for Women. Then in this hospital, in 1872, I had a multilocular ovarian cyst, which I removed in this theatre, using the spray, and with all the precautions, as far as we could tell, of an antiseptic nature; but the patient died. Then in 1874 I had here another case, but fearing to operate in the hospital I availed myself of Dr. Graily Hewitt's offer to do it in a house he then had in Gower-street, and the patient was removed there. I removed the tumour, and she did perfectly well. Then the last, the fourteenth case, is the one I have done here, and she, I am happy to say, has made a good recovery. My experience, as I say, is very small compared with that of many other surgeons. The outcome of it is this, that certainly in the present day I think you should use the ligature, tie the pedicle carefully, and drop it in, taking all precautions of an antiseptic nature; but my advice is not to use the spray. It is better that the patient should be isolated, and particularly that she should be operated upon in the room where she is going to remain, so as to avoid all risk of going to and fro.

I think I ought to say that even the best ovariotomists, of course, make mistakes in diagnosis. The late Mr. Baker Brown, who was an extremely able surgeon, used to say that no one could tell what an abdominal tumour was until he had his hand upon it inside the abdomen; and there is a great deal of truth in that. We make elaborate diagnoses sometimes, and we find them quite contradicted when we get inside. I might mention one case which I myself had some years ago, of a patient who had a cyst with very distinct fluctuation, as distinct as in the patient that I have lately operated on. I had another opinion upon her case from a gynæcologist of eminence, who was quite sure that it was an ovarian tumour, and he recommended me to do ovariotomy. I laid the woman's abdomen open, and on manipulation I found it was not an ovarian tumour at all, but an enormous cyst of the kidney. Then came the question what was to be done. I think, if I had then known as much about kidney surgery as I do now (it was many years ago), I should simply have tapped the patient from behind, closed the abdominal wall, and drained her from behind, much as in the case of the patient lately upstairs in No. 5. But in those days kidney surgery had hardly begun; therefore, recognising that it was a kidney cyst, I proceeded to remove it in the same way that you would do an ordinary nephrectomy from the front. I removed an enormous cyst, and without very much difficulty tied the pedicle, and the patient survived the operation for some days; but she died of a low form of peritonitis, which I believe might have been obviated by drainage. I say so now because we know so much more about these things than we did then. But this is by no means a solitary case. I myself have seen a well-known operator make the same mistake, and find a kidney cyst instead of an ovarian cyst. I have also seen the spleen mistaken for an ovarian tumour, and I suppose it is hardly possible to avoid occasional mistakes in diagnosis. But when you have a case before you, having made a fair diagnosis that it is ovarian, the only way really to settle its nature is to put your hand inside the abdomen, and then deal with it in the way I have described.

FEMALE PHARMACISTS IN RUSSIA.—A Russian decree, which has long been expected, on the subject of female pharmacists, has at last been promulgated. This permits females who have gone through a certain number of classes in the gymnasium, and who, besides, have undergone an examination in Latin, to enter pharmacies as apprentices. At the end of the regular period they must pass the ordinary examinations at a university or the Military Medical School, which answers to a medical faculty of the University of St. Petersburg, though the two institutions are entirely distinct. One of the provisions of the decree forbids a pharmacist to take male and female apprentices at the same time.

QUEEN'S HOSPITAL, BIRMINGHAM.—Miss Mary S. W. Roberts, head nurse of St. George's Hospital, has been appointed lady superintendent of the above-named hospital.

ABSTRACT OF THE

Croonian Lectures

ON

ANTIPYRETICS.

Delivered at the Royal College of Physicians,

BY DONALD MAC ALISTER, M.A., M.D., F.R.C.P.,

FELLOW AND LECTURER OF ST. JOHN'S COLLEGE, CAMBRIDGE.

LECTURE I.

THE lecturer began by explaining that the lectures he proposed to deliver were complementary to the Gulstonian Lectures of last year. In these the treatment of fever had been intentionally passed over. But treatment could not long be absent from the thoughts of a physician, however theoretical the bent of his mind; and when very unexpectedly he was offered another opportunity of addressing the College as Croonian Lecturer, he had proposed, and the President and Censors had approved the choice, to deal with the practical bearing of the theory of fever. The regulations under the new scheme prescribed "lectures on one or more subjects in anatomy, physiology, and pathology, with a view to the prevention, control, and cure of diseases." Though the subject of the lectures was for brevity given as "Antipyretics," he did not propose to limit himself to the drugs so called or their pharmacology. He would discuss rather—(1) the light thrown on the nature of fever by the means employed successfully for its treatment, and (2) the lessons in the treatment of fever which flow from a right understanding of its nature.

The outlines of the theory presented last year were recalled. The nervous mechanisms of heat-loss or thermolysis, of heat-production or thermogenesis, of heat-balance or thermotaxis, constituted the thermal nervous system, and these mechanisms were in ascending order of complexity and of evolution. Fever was a dissolution beginning with thermotaxis and extending to the inhibitory mechanism of thermogenesis. Hyperpyrexia was a still deeper dissolution, and extended to thermolysis. Much still remained to render complete our knowledge of the anatomy and physiology of these several mechanisms, but contributions were constantly being made, and obscurities cleared away. As he was anxious to strengthen in their minds the conviction of the objective reality of the thermal system, he would first call attention to certain recently acquired anatomical and physiological facts which had not yet received sufficient notice.

First as to the physiology of thermolysis. The Harveian Orator, Dr. Stone, had pressed on the College the importance of physical investigations in medicine, and regretted that they were at present less regarded than researches in histology or bacteriology. A series of valuable experiments, involving high skill in physics and in mathematics, and therefore perhaps overlooked, had been made on the radiating power of the skin by Dr. Masje under Professor Eichhorst of Zurich. Probably 60 per cent. of the heat leaving the body did so by radiation. But the laws of this loss had not been inquired into, or had been assumed to be governed by physical analogies. At the Zurich Hospital, by the aid of an instrument of great delicacy and precision, on the principle of Langley's bolometer, the true laws of skin-radiation had been worked out and proved to be strikingly suggestive. A hot body radiates less as its temperature falls. This was the physical law, but not the physiological. A part of the skin suddenly uncovered naturally became cooler, but its radiation increased steadily as the temperature fell, unti a certain limit was reached. Radiation was more intense in men than in women, in boys than in girls, in young persons than in old, in the vigorously healthy than in the feeble or convalescent. In other words, radiation was more active as the processes of nutrition and metabolism were more active. Reasons were given for believing that the radiating power of the skin, which could be shown to depend on its physical and chemical constitution, was subject to nervous control; and thus what was apparently the most purely physical of

all the thermolytic processes was not outside the domain of the thermal nervous system. In discussing the value of an antipyretic method, in explaining its mode of action, we could not in future ignore the questions—What changes does it call forth in the texture of the skin? How does it modify the great thermolytic function of radiation?

Another subject connected with thermolysis deserved some mention—namely, the connexion of peripheral temperatures with central. The lecturer, in common with many others, had been perplexed and baffled by the apparent lawlessness of surface temperatures as taken by any of the ordinary methods. So doubtful were any results based on them that experts regarded with suspicion all observations but their own. Recent inquiries also carried out at Zurich under Professor Eichhorst showed that the difficulty lay chiefly in an erroneous method of procedure. When peripheral temperatures are taken continuously for some hours (eight or ten) instead of some minutes, it appears that in health as well as in disease the curves obtained usually consist of two distinct portions. The first corresponds to a stage of an hour or so, in which the temperature is highly irregular and different from the central temperature. This is the *ambiguous* stage. The second is marked by much greater uniformity and by nearness to the central temperature. Like the latter, it tends to be constant and stable. This is the *continuous* stage, and it is so regular, so normal, that we are safe in drawing conclusions from its changes. Observers had hitherto seldom got beyond the ambiguous stage, and hence the irregularity and confusion already alluded to. The effects of antipyretic methods on the continuous stage of the peripheral temperature would form an interesting and trustworthy study.

Next, the anatomy and physiology of the thermogenic system had received valuable contributions. New points in the thermogenic tract had been made out (he would not call them *centres*) by Ott and others in America, using the methods and working under the inspiration of Professor Wood. In the rabbit four points in the cerebral axis were now known, the stimulation of which gave rise to increased heat-production, and not simply rise of temperature. Two were at the anterior and median borders of the corpus striatum, one between that body and the thalamus, and a fourth at the anterior end of the thalamus. Dr. Hale White had in part verified the localisation as regards the anterior striate centre, and had made out that unilateral irritation gave rise to bilateral pyrexia. It appeared that in the rabbit the lateral differentiation of the thermal tracts, like that of the motor, was still incomplete.

The question as to whether these points were on excitor or inhibitory tracts was next discussed, and the experiments of Girard in Geneva and Baginsky and Lehmann in Berlin were adduced as apparently bearing on the question in opposite senses. Reasons were given for thinking that the so-called "striate heat centre" might be a passing-place if not a meeting-place for both anabolic and catabolic fibres. Ott the other day had announced certain new discoveries which pointed to cortical areas being concerned in heat-regulation. An area at the upper end of the Sylvian fissure appeared to control the striate region. Thus, when thermogenesis was induced by puncture of the striate "centre," and an abiding pyrexia resulted, stimulation of the cortical area lowered the temperature and diminished the thermogenesis. The bearing of such observations on the localisation and nature of the thermotaxic mechanism was alluded to, and the probability of further advance estimated. In Dr. Gaskell's pregnant hint—namely, that his explanation of inhibition as anabolism is applicable to nerve centres as well as to peripheral organs—the lecturer saw the promise of much new light on the mechanism of thermotaxis.

LECTURE II.

In the first lecture the anatomy and physiology of the thermal nervous system were dealt with, in order, among other things, to show that in the minds of those who are most actively engaged in experimental inquiry the conviction of its existence is a guiding principle, and no longer a plausible speculation only. Without a sufficient belief in the definite character of the apparatus of thermal nerves and centres, some of what was about to follow would appear more theoretical than it really was.

In the second lecture, partly by way of relief, certain questions would be discussed connected with what might be termed the teleological pathology of pyrexia. It was admitted that fever is a sign of disorder, of disturbance, of a physiological function or functions. But in all ages some had maintained, and the proposition was now being revived, that this disorder is not wholly or not in itself injurious. It was regarded as a wholesome reaction against a *materies morbi*, a manifestation of the *vis medicatrix*. Cohnheim had asked: "What is the deeper meaning, the true significance, underlying the febrile process? Does the organism gain any advantage from the rise of temperature which characterises pyrexia?" He had answered that it might plausibly be maintained that in febrile heat we should recognise a sanative power, by which the body consumed and destroyed a virus it could not directly eliminate. From a practical point of view it might become more urgent to appraise the *dangers* which menace the body in fever, and before a conclusion was reached it would be necessary to distinguish with certainty and precision between the parts played by the specific febrile disease and the disorder of the body heat which accompanied it. "But," added Cohnheim, "when that time comes I anticipate that physicians will more and more regard fever, not indeed as a condition free from danger, but as on the whole a wise provision of nature." Hilton Fagge was inclined to take a like view, but had given few reasons other than those based on a possible explanation of the phenomena of relapsing fever and ague. It would be well to examine more closely the grounds of this view—that fever serves a salutary purpose.

After the long prevalence, especially on the Continent, of the idea that the dangers of fever are primarily due to the high temperature, and that to reduce the latter is the chief end of treatment, the reaction was remarkable. It was due, to some extent, to disappointment with the effects of vigorous antipyretic treatment, external and internal, on the course of some of the specific fevers. Expectations had been exaggerated, because based on a one-sided theory, and they had not been fulfilled. Another factor in the reaction was the growth of the germ theory. The thesis of those who extended their bacteriological speculations to fever appeared to be that the specific fevers are due to the intrusion into the body of certain specific living cells or microphytes; that these engage in a struggle for subsistence with the tissue cells of the body; that pyrexia is a reaction brought about (by natural selection) to favour the latter in the struggle, and to hamper or disable the former; and that the result is, or should be, that the microphytes are overcome and consumed, and thus through fever the body is restored to health.

It was true that some of the best-known microphytes were checked in their growth or multiplication by high temperatures. Gaffky showed that typhoid bacilli formed spores with difficulty at 107·5° F.; Koch, that tubercle bacilli ceased to grow after being kept for some weeks at a like temperature. The bacillus anthracis continues to grow, but loses in virulence, if kept for some weeks at 108·5° or for some days at 109·5°. Surely it could not be held that such facts were really relevant. A body temperature of from 107° to 109°, kept up for days or weeks, was too powerful a remedy. The body would be consumed before its parasite.

A less direct explanation was suggested in a recent lecture by von Ziemssen—namely, that the pyrexia so alters the constitution of the tissues that the microphytes no longer find in them a suitable soil, and so perish. But against this was the fact that the exanthemata tended strongly to run a definite course whether the fever was high or low. The gravity of the infection stood in no proportion to the less or greater intensity of the pyrexia. Rather was it the case that the highest fevers were the most enduring, the slighter fevers the briefest.

The cases cited by Hilton Fagge, by Murri, by Finkler, and others, in which the febrile paroxysm seemed to have a destructive effect on the living virus of relapsing and of intermittent fevers were then discussed, and were shown to admit of a simpler explanation, one applicable to all the specific diseases attributed to specific micro-parasites. These parasites seem, like other living creatures, to have a definite life-period, in which they grow, multiply, exert their special action, and decay. This period is independent of pyrexia, independent of antipyretic treatment, and independent of external conditions. The definite duration of virulence in typhus, measles, small-pox, &c., and the sudden extinction of its vitality at the crisis in croupous pneumonia, bespoke a normal biological property in the virus, a law of its life which forbade it to endure longer than a certain time. It had shrewdly been asked (by Goldscheider):

If pyrexial temperatures are not in themselves dangerous, but merely serve to purify the body without injuring it, why are they in ordinary cases confined within such narrow limits? If fever be a process with a purpose, would it not be better to nip the growth of the microphyte in the bud by a prompt and intense rise of temperature at the beginning of the illness?

In concluding this part of the argument, the lecturer asked a question of those who relied on the all-embracing doctrine of evolution, and argued that so universal a symptom as fever following on bacterial invasion could only in the course of ages be developed if it conveyed some advantage in the struggle for existence. Were not the bacterial plants also engaged in a like struggle? Had they not, too, in the course of ages acquired properties which helped them to grow and multiply? Might not the fever they induced be salutary—to the bacteria? He laid no stress on such an argument, but adduced it to show that the reasoning of the germ theorists on fever was two-edged, and could be turned against themselves. A general fallacy underlay many speculations of this kind. In speaking of fever generally, of its treatment, of antipyretics and antipyresis, the febrile process had been too much regarded as a single entity. There were many morbid processes having fever as a concomitant; some one or other of these was studied, and the laws arrived at for its causation, pathology, and treatment were too hastily generalised so as to apply to other and widely different morbid processes. Even if we were to admit it possible that in relapsing fever and in ague the pyrexial attack conveyed some benefit, it would be rash to infer at once that all pyrexia is beneficial and apply the law to the case of acute rheumatism or septicæmia. In fact, fever was at best a symptom, and a symptom whose significance was very different in different cases. Parallel illustrations from the phenomena of cough and of pain were given. The only sound therapeutic method was to study the particular circumstances in which the symptom arose. Yet there were two extreme schools: one insisting that all pyrexia is dangerous, and that high temperature must be lowered at any cost; the other, whose headquarters were at Vienna, maintaining that, as fever is salutary, it should not be meddled with—the school of pure expectancy. The postulate of the latter had been dealt with; it was worth while to examine the postulate of the former—that high temperature is purely mischievous and the efficient cause of all the dangers that threaten a fever patient's life. Dr. Cayley, in a previous course of Croonian Lectures (1880), had dealt with this question in a masterly way, and his conclusions were quoted. He thought it decisively proved that the view in question was only in part correct, and that many of the morbid phenomena accompanying fever occurred independently of it. The lecturer would not go over the same ground, but adduced new considerations bearing out and strengthening Dr. Cayley's conclusion. In the first place, he referred to his Gulstonian Lectures in illustration of the point that "high temperature" was an ambiguous term, and might or might not connote pyrexia. The temperature might be raised in various ways, some of them harmless. In thermal ataxia, in disordered thermolysis without other change, the temperature might rise and remain high. But there was ground for the conviction that such non-pyrexial elevation of temperature was not in itself a danger. Take, for example, the cases of aseptic operation or injury recorded by Volkmann and other surgeons, in which temperatures as high as 105° were accompanied by no loss of appetite, no distress, no symptom such as could be characterised as febrile.

Many of the current statements as to the baneful effects on tissue and function of mere high temperature were based on experiments in which animals were subjected to forcible over-heating. These experiments were reviewed, and, in the light of fresh researches by Naunyn, Welch of Baltimore, and others, shown to be capable of other interpretations. When proper precautions as to food, water, and air were taken, animals could be kept with body temperatures varying about 107° for days or weeks, and that without grave injury or even discomfort. Danger did not arise till a higher point was reached, and then the result showed that the thermal mechanism being overstrained, that dissolution of it which we called hyperpyrexia had set in. The phenomena of relapsing fever were taken as bearing in the same direction. In this disease, the subjects of which were commonly weak and ill-nourished, temperatures of 107°, lasting for five or six days, were frequent, and were perfectly well borne. The small mortality of the disease corroborated this. The conclusion thus reached was (1) that high temperature in itself was not in general a salutary condition in the infective diseases, and (2) that it was not in itself the efficient and sufficient cause of all the disturbances commonly called febrile.

LECTURE III.

In the second lecture it had been shown that, when carefully examined, the experimental evidence had failed to prove the proposition that the high temperature of febrile diseases is the efficient cause of the morbid phenomena that accompany it. Both in man and in animals the temperature might be considerably raised, and for considerable periods of time, without permanent danger to the organs or their functions. In discussions on the subject, however, it appeared that the phrase "danger of high temperature" was used in two different senses, which were sometimes confused, and this confusion led to misunderstanding of the issue and ambiguity in the conclusions arrived at. By some the phrase was understood to mean the mischief caused by mere heating up of the body and its tissues. This was the sense in which it was taken by such an authority as Liebermeister when he said: "A patient whose temperature keeps persistently at 104° or higher will certainly die from this cause alone, either after a few days or after a somewhat longer interval, according as his power of resistance is less or greater." It might, on the other hand, imply that high temperature was an index or sign of the gravity of the disease from which the patient was suffering. In typhoid or pneumonia, for example, we might say, as a matter of experience, that danger threatens when the temperature rises to 106°, meaning that such a temperature usually indicates that the disease is taking a dangerous course. So long as a certain rough parallelism between temperature and the gravity of the disease was all that was postulated there was little to object to in this statement, but it must not be pushed too far, as cases constantly occurred in which the parallelism was not observed. Instances were cited where, with the gravest signs of danger in typhoid, the temperature was little, if at all, above the normal, and where improvement took place when the temperature rose nearer to the ordinary level. Wunderlich, who might be called the law-giver of the subject, insisted on this point, and had formulated statements which had been forgotten by some who thought their work was based on his principles. To illustrate some of these the lecturer gave examples from Dr. Warfvinge's experience at Stockholm, of which accounts had appeared in the Transactions of the International Medical Congress of 1884 and elsewhere. From these it appeared that in typhus, in typhoid, in pneumonia, and other specific fevers it was not the height of the temperature *per se* that made a case dangerous, for high maxima occurred frequently in mild cases, and low maxima in fatal cases. Among the fatal cases of typhoid there were more of the lowest maximal temperatures and fewer of the highest than among the severe cases that recovered. In pneumonia, while very high temperatures were, on the whole, rare, there was no appreciable difference in the maxima reached respectively by favourable cases that recovered and by unfavourable cases that were fatal. In the pneumonia of children especially it was noticeable that, though the temperatures ran unusually high, the prognosis was very favourable. So likewise, on comparing measles with scarlatina, the maxima in the former were higher than in the latter, and the duration of the fever was much the same, yet the latter was, on many accounts, a graver fever than the former.

Such considerations forced us to consider the other factor in these diseases—viz., the infection; it was obvious that if the grave morbid phenomena could not be set down to the pyrexial temperature we must attribute them in large measure to the action of the specific virus or poison. Experiments were cited to prove that some at least of the textural changes which were thought to be most undoubtedly induced by heat were capable of being produced by infective causes both in animals and in men. The granular or fatty change in the muscles, and more particularly in the heart, was especially referred to, and even the cerebral disturbances and the disorders of the secretions could not be excluded.

Turning then to the question of treatment, it was pointed out that, as the chief pathogenic factor in the specific fevers was apparently the specific virus, our first

object of search must be for a specific remedy capable of destroying or counteracting the virus. Quinine in malarial fever, and salicylic acid and its congeners in rheumatic fever, were of this nature, and their claim to be antipyretics rested largely on their specific action. In other fevers such specifics remained still to be found, though some steps in this direction had been made; and though there was much promise of greater progress in the future, we were at present obliged to be content with less radical and more symptomatic remedies. The ideal febrifuge would allay fever by restoring to healthy function the disordered thermotaxic mechanisms, thrown out of gear, like other mechanisms, by the action of the morbid poison. Such a true febrifuge had not yet been found. The next best thing was to discover a mode of treatment which should act vicariously for the thermotaxic mechanism, compensating for its lost control over the thermal functions. A drug might conceivably act by checking thermogenesis simply, or by greatly increasing the inadequate thermolysis of fever. The former might be called an active antipyretic; the latter was properly a refrigerant.

To give a concrete turn to the discussion, it would be well to consider in some detail the physiological properties of a particular drug, as far as they were known, and inquire to which of these classes it might best be referred. Antipyrin had attracted so much notice, and had been so largely used and so closely investigated, that it would serve well as an example. Some of the effects of antipyrin on the thermolytic processes were then dealt with. It was shown by the data of an actual experiment that a full dose of antipyrin had a marked effect in increasing the rate of radiation from the unexposed skin, as measured by Masje with Eichhorst's radiometer. For example, in a case of febrile phthisis, while the temperature fell in two hours from 101° to 97·7° under antipyrin, the radiation increased rapidly, and was twice as great at the end of the second hour as just before taking the drug. The rate of radiation from the cheek, which, as mentioned in the first lecture, was pretty nearly constant in normal circumstances, increased in the same time from 57 units to 133 units. Antipyrin so modified the physical and chemical properties of the skin as to produce this protracted and steadily rising loss of heat by the single channel of radiation. Nothing but radiant heat was measured, and so nothing would be inferred as to the total heat-discharge.

Next as to the effect on peripheral temperature as determined by Schwarz. In fever the peripheral temperatures underwent from time to time extremely marked oscillations. If at the time antipyrin was given the peripheral temperature was not very different from the central temperature, no marked differential effect was produced in the former by the drug. After some oscillations, both central and peripheral temperatures began to sink, and at not dissimilar rates. But if the peripheral temperature happened to be low (under 95°F. or so) a remarkable effect was produced. A sudden ascent of its curve was almost invariably observed until it approached or overshot the central curve, and then after some oscillations the two again began to fall together.

On thermogenesis also the effect of antipyrin had been much investigated, both by directly physical and by chemical or indirect methods. Dr. Girard of Geneva, whose investigations on the thermogenic function of the corpus striatum had been mentioned, had induced pyrexia by stimulating that body, and found that a subsequent dose of antipyrin was able to reduce the temperature and to keep it down for a time. He had also first given antipyrin and then stimulated the thermogenic region, and found that the temperature still rose, but to a less extent. These results, though suggestive and interesting, were not conclusive as to the effect of the drug on heat-production, for in the first place the rise of temperature obtained was never very great, and in the second the experiments were thermometric only. The calorimeter must be used to determine whether the heat actually produced in fever was diminished by antipyrin. Dr. Wood and Dr. Hare had turned their attention to this point, and though their results were at present somewhat incomplete, and laboured under certain outstanding difficulties of interpretation, they appeared to show that heat-production *was* lessened by the drug. The fever they had tested was that induced by injecting a "pyrogenic" agent, especially an albumose derived from certain specimens of pepsin. Dr. Hare had tested antifebrin on animals suffering from this artificial fever with a similar result. It should be added that in the experiments in which they obtained a reduction in the rate of heat-production they also observed a diminution (though a smaller one) in the rate of heat-loss. Dr. Wood had, moreover, assured himself that the result was apparently unaccompanied by any measurable effect on the circulation, at least when the antipyrin was given in therapeutic doses.

Lastly, two out of many inquiries into the effect of the drug on metabolism, as evidenced by the excretions, were considered. One by Robin, communicated to the French Academy, was vitiated by faults of method, inasmuch as it did not appear that any precautions were taken to secure nitrogenous equilibrium in the patients observed. Still the results, taken for what they were worth, were suggestive. Robin found, by examination of the urine of healthy and diseased persons before and after taking antipyrin, that the drug in health always diminished the urine, the total urinary solids, the urea, and the chlorides, and that it increased the uric acid. In acute febrile diseases these effects were less marked than in health, and varied somewhat with the particular disease. The conclusion he derived from his chemical examination was that antipyrin acted directly on the nervous system, lowering its excitability, and diminishing the catabolic and oxidative changes in the tissues.

A far more careful investigation had been carried out in 1886 by Riess of Berlin on typhoid patients. He chose patients in the height of the fever, and their diet and other circumstances being so regulated as to make the successive days comparable, he measured the entire excretion of nitrogen during nine consecutive days. During three days the fever was left untreated, for the next three the temperature was kept down by antipyrin, and for the last three it was allowed again to rise. The result was, briefly, that the nitrogen excreted during the days under antipyrin, when the fever was suppressed, was less by 15 to 30 per cent. than during the days before and after, when the fever was allowed free course.

ON THE

ELEMENTS OF SUCCESS IN THE OPERATION FOR CLEFT PALATE.

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IT is generally agreed that the plan of operating for cleft palate which Mr. Thomas Smith has introduced, and which includes the administration of chloroform and the use of the special gag which he has invented, is, in the hands of those who are familiar with it, one of the most satisfactory of all plastic operations. Cases, however, sometimes present themselves which show that there are certain particulars which still require to be advocated. Patients are not rarely admitted into the hospital in whom a previous operation has failed, apparently from the omission of some essential point, while in other instances the opinion has been expressed that the condition of the palate was so unfavourable that no operative treatment ought to be undertaken, and yet these cases presented no feature of unusual difficulty, and were subsequently cured by a single operation. I think, with these examples in view, it may be useful to state the circumstances upon which success mainly depends.

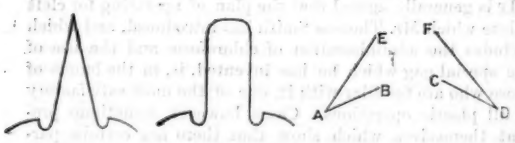
1. In the first place the age of the patient is very important. The mistake sometimes made is that of operating too early. No doubt it is possible to cure the slighter forms of cleft of the soft palate in children who are only a few months old. But even in the most favourable cases failure will be more frequent than success. Even when the cleft is limited to the soft palate the operation had better be postponed till the child is between two and three, or older still, unless he is well grown and strong. In cases in which the hard palate is involved operative treatment should be deferred till the child is at least three and a half. In the average run of cases it is better not to operate till the patient is between four and five. No doubt the sooner the operation can be performed with success the better, especially because the improvement in articulation will then be most marked. The fact is, however, that when done earlier than the time I have mentioned there is a great chance that the operation will fail, and then future cure will be rendered much more difficult. Besides, the operation is so considerable that in very young children it is by no means free from

danger to life. In instances in which the local conditions are very unfavourable (these are mentioned below) the operation should be delayed even beyond the fifth year, for, as growth proceeds, the fissure will tend to become narrower and the soft parts more fleshy and firm. Several cases have come under notice in which, though when the children were three years old the possibility of closing the fissure seemed very doubtful, all the conditions had become favourable when the patients had reached the age of six. Indeed, were the mere closure of the palate the only question, there is no doubt that the best age for operating—I mean the age at which the risk of failure would be least—would be between nine and twelve. Of course, there are many reasons for operating earlier; but the fact remains that in difficult cases the chance of success steadily increases as childhood advances.

2. Care must be taken to see that the patient is in good general health before the operation is performed. The temperature should be taken morning and evening for two or three days before it is proposed to operate, and if it is not absolutely normal the operation should be postponed. Care must also be used to ascertain that the child has not been exposed to any of the exanthemata, especially scarlet fever. Should the patient have a cough, no matter how slight, or diarrhœa, the operation ought to be postponed.

3. After the age and health of the patient come the width and the shape of the fissure and the conformation of the bones at the roof of the mouth. The mere antero-posterior extent of the cleft is immaterial. It is quite as easy to close a fissure that involves the whole length of the hard palate, as it is to close one of similar width that involves only the posterior part. Indeed, it is sometimes easier, because the closure of the anterior part removes tension from the sutures posteriorly, where union is most likely to fail. The really important points are the width of the fissure, the shape of its anterior end, and the height or pitch of the arch of the hard palate. As to the width of the cleft, it is obvious that, other things being equal, the wider the cleft, the more difficult it will be to close it. As to the anterior end of the cleft, when this is pointed like a thin wedge (Fig. 1) the shape is favourable; but when the anterior end is rounded like the bow of a hairpin (Fig. 2), even though the cleft

FIG. 1. FIG. 2. FIG. 3.



further back is not very wide, the difficulty of closure will be considerably increased. As to the height of the palate and the shape of the arch, the higher the arch and the more it approaches the perpendicular—the width of the cleft remaining the same—the easier will the closure be; while the lower the arch the more difficult does closure become. This is shown in Fig. 3. Supposing that in each of two cases the cleft is half an inch wide, and that in one the arch takes the direction of A B C D, and in the other the direction of A E F D: when the soft parts are brought down, the flaps A B and C D will be too short to bridge over the gap; but when the much longer flaps A E and F D are brought down, they will meet easily, and even overlap.

Supposing that the operation is performed in accordance with Mr. Smith's published directions, there are several points that have a considerable effect on the result. The first is that when the edges of the cleft have been pared, the soft parts on either side should be freely separated, not only from their general connexions with the bones which they cover, but especially from their line of attachment to the posterior border of the horizontal plate of the palate bone—that is, along the transverse line of junction of the soft with the hard palate. As this line of attachment is very firm, separation must be effected by the free, though careful, use of blunt-pointed curved scissors, employed first to divide the structures along this line, and then, their blades being closed, as an elevator to complete the separation further forward, if this has not been already done. When this proceeding has been thoroughly carried out, the palate will hang in a flaccid state in its whole length, and in favourable cases its edges will admit of easy approximation. Another point is that when the cleft is extensive the soft parts should be detached from the bones, not only along the borders of the cleft, but outwards and forwards nearly to the teeth. Unless this is done, the rapid reunion that takes place between the soft parts and the bones will tend to restore the former to their original position, and will thus produce mischievous traction on the line of sutures. This wide detachment of the soft parts—varying, however, of course, with the extent of the cleft—will do no harm, for as blood reaches them chiefly from the sides (the branches of the posterior palatine artery running not far from the alveolar border) their mere separation does not materially injure their vascular supply. Another point is the relief of tension on the line of sutures by making lateral incisions. Those who operate only occasionally are a little uncertain as to the length to which the cuts should extend and the exact way in which they should be made, so that they are apt to cut either so freely as to endanger the vitality of the palate, or so sparingly that tension is not sufficiently relieved. The rule is that the incisions should run from before backwards and a little outwards, midway between the sutures and the alveolar border of the palate. The whole thickness of the palate should generally be divided only in the anterior half of the incision. In the posterior half it will be enough to divide merely the mucous membrane without cutting deeply into the other layers. By this course the large branches given off from the posterior palatine artery are preserved to supply the tissues, and the possible danger of injuring the posterior palatine artery itself is avoided. The relief of tension obtained by this proceeding is shown by the extent to which the edges of the divided mucous membrane immediately retract. The precise length of the lateral incisions will vary in different cases; the guide must be the amount of tension that has to be relieved. This can best be ascertained by examining the palate, after the edges of the cleft have been brought together, with the tip of the finger; and the operator must prolong the incisions until he finds that the parts have become distinctly flaccid, and that they no longer give the sensation of a tense dome, and that none of the sutures have the appearance of dragging. When the soft parts are scanty, and it is found that as the sutures are passed there is considerable tension, or even that the edges cannot be brought together, it will be best to make the lateral cuts at once, and then, except in cases in which the operation had better not have been attempted, the parts will come together. As to the sutures, these should be of silver for the hard palate, and of horsehair, mainly or exclusively, for the soft; and the first to be passed should be a fairly deep silver suture, obtaining a secure hold, at about the junction of the hard with the soft palate. Then the soft palate should be closed to the tip of the uvula; and, lastly, the hard from behind forwards. If the sutures in the hard palate are producing marked tension, they should be only loosely twisted for the moment, and should be tightened with torsion forceps only after the side cuts have been made.

For four or five days after the operation the child should be fed exclusively upon milk and beef-tea, with a little brandy added to the milk if this seems necessary. From the sixth day to the fourteenth he may have, in addition, fine bread crumbs well softened in gravy; bread sauce, made by scalding finely-grated bread crumbs in milk; potato finely minced in gravy or beef-tea; corn-flour, or ground rice puddings made with milk and eggs, or soft custard pudding. Only when the palate has healed, and the sutures have been removed should solid food be allowed. As harm may be done by asking the child to open his mouth to show how the palate is getting on, it is best to follow the plan of requesting that no one should look at the palate for the first week. Looking can obviously do no good; for even if union is failing to take place nothing can be done. The best chance always is to keep the palate at complete rest. Should the child flag, or look pale, or not take his food, he should, even on the second or third day, if the weather is warm, be sent out for a drive—if this can be done—twice a day; or he should be allowed to be up and walking about, for this will do no harm if he is carefully watched. Several times I have followed this plan with advantage. When children are evidently doing well, they may be kept in bed, where they are most easily managed, for a week, and then allowed to be up. As a rule, no local appli-

cation should be made to the palate. Certainly there should be no syringing. Sometimes, however, chlorate of potash may be usefully added to the milk, in which it is nearly tasteless, or the mouth may be rinsed with a 2 per cent. solution of boroglycerine. The sutures are sometimes, I believe, removed much too soon. As a rule, they should not be taken out till the tenth day. It will do no harm to leave them in for a fortnight. It is remarkable how much closure may occur by granulation in cases in which primary union has partially failed. In several cases, though at the end of a week only a narrow bridge remained between the two edges of the cleft, complete union has subsequently occurred by the gradual extension of granulations.

But little assistance, in regard to prognosis, in particular instances, can be derived from statistics in such an operation as staphylorraphy. Each case must be judged upon its own merits. It may, however, be said that in instances in which the patient has reached an appropriate age, and is in good health; in which the soft parts are fairly abundant; and in which the details alluded to above receive attention, failure will be so rare that operative interference may be confidently recommended. I have made no reference to other forms of operation that have been recommended by different writers, for, so far as I have been able to judge, the proceeding devised by Mr. Smith is by far the best with which I am acquainted.

Bruton-street, W.

A CASE OF

IDIOPATHIC SUPPURATION OF THE SPINAL DURA MATER.

By ROBERT MAGUIRE, M.D., M.R.C.P.,

PHYSICIAN TO OUT-PATIENTS AND JOINT LECTURER ON PATHOLOGY, ST. MARY'S HOSPITAL.

THE existence of an idiopathic inflammation of the spinal dura mater has been very generally doubted. In the majority of cases the inflammation is produced by extension of disease from neighbouring parts. Caries of the vertebræ, extension of a bedsore, and rupture of an abscess into the spinal canal are the most usual causes. The question of deciding whether the suppuration is idiopathic or not is complicated by the fact that the pus, when formed inside the canal, may make its exit amongst the muscles of the back or beneath the thoracic pleura, as in a case recorded by Mueller, and another by Dr. Spencer.[1] The external abscess may then be considered as the primary cause of the disease, and was so considered by Mueller. Dr. Spencer showed that in his case the arguments were strongly in favour of the meningitis being primary. In the instance I have to record, the disease, as will appear, was certainly primary in the spinal canal, and, as no cause whatever could be discovered before or after death, must be considered as of idiopathic origin. The rarity of the affection renders it desirable that each individual case should be recorded. The notes from which the clinical account is reported were carefully taken by Mr. Roberts, house physician to St. Mary's Hospital.

C. W.——, aged seventeen years, a groom, was admitted into St. Mary's Hospital on Nov. 27th, 1887. On Nov. 13th he had slept in damp sheets, and a few days afterwards complained of pain in the lumbar region, but kept at his work until Nov. 20th, when the pain became much worse and almost prevented him moving. The patient was at this time treated at home for rheumatism, by salicylate of soda and counter-irritation of the loins. The pain increased in severity, and on the 23rd the patient was quite unable to move his legs, and could move the arms only with great difficulty. At this time it was noticed that there was actual paralysis, and that it was not merely pain which prevented movement. On Nov. 24th the arms were entirely paralysed, the motions were passed involuntarily, and the urine was retained. There had been no shooting pains, rigidity, twitchings, or hyperæsthesia of the limbs, and no rigidity of the spine or retraction of the head. The patient had, however, complained of numbness in the feet and legs, and his medical attendant had noticed a blueness of the lower extremities. There had been no previous disease, and there were no other points of consequence in the history. It may be mentioned, however, that the patient had suffered no injury.

On admission into hospital the patient was fairly well nourished, but looked exceedingly ill. The face was pale and somewhat cyanosed; the lips were blue. The legs and feet were flaccid, showed no wasting, and were of a bluish tint. There was total absence of voluntary movement and of all forms of sensation. The knee jerk was entirely absent on both sides, and no ankle clonus could be elicited. The plantar reflex was very feeble, if present at all, and the cremasteric reflex on each side was absent. The arms were flaccid, the hands and fingers bluish, and showed absolute loss of voluntary motion and sensation. There was no loss of sensation over the chest or abdomen. The respiratory movements, both abdominal and thoracic, were good. None of the trunk reflexes could be produced. There was no retraction of the head. The movements of the eyeballs were perfect. The pupils were moderately dilated, and contracted perfectly on exposure to light and on accommodation. There was no paralysis of the face, and the movements of the tongue and lips and of deglutition showed no abnormality. There was also no anæsthesia of the head and neck. The motions were passed involuntarily. The urine was retained. Some pain was complained of in the lower part of the abdomen, which was relieved by drawing off thirty-eight ounces of urine from the distended bladder. There was slight pain in the vertebral region on moving the patient, and severe pain was complained of when pressure was applied to any part of the vertebral column. There was no pain when the patient was completely at rest. No œdema or puffiness was observed in the skin of the back, nor were there any bedsores. The skin generally perspired freely. The patient was quite conscious, and answered questions intelligently. The temperature on admission was 100·6°; pulse 100, regular and soft. Heart normal. The respirations were shallow; a few moist râles were heard at both bases, but there was no dulness. The urine was normal.

During the night after admission the patient's breathing became more laboured, and the thoracic movements less observable. The skin of the trunk became anæsthetic. The patient was able to swallow nourishment, and was perfectly conscious. At 4 o'clock in the morning both thoracic and abdominal respiratory movements were very slight, and the patient was becoming very cyanosed. During the night the temperature had risen, and at 6.15 A.M. was found to be 110° in both axillæ. At this time the pulse-rate was 140 in the minute, small and weak; the respirations were 80 in the minute, and very laboured. The skin was perspiring profusely, and the patient was still conscious. An ice-bag was applied to the nape of the neck, and ten grains of quinine were administered. The temperature was taken at frequent intervals up to noon, and varied from 103° to 106°. During this time the patient perspired freely. He was quite conscious and rational, and swallowed nourishment. Nevertheless he gradually became weaker, and died soon after noon.

A necropsy was made about twenty-four hours after death. On removing the skin and muscular layers from the spine, a large quantity of somewhat thick pus was found infiltrating the muscular planes in the lumbar and lower cervical regions, though much more marked in the former part. The pus was seen on both sides of the vertebral column, and in the lumbar region was most copious on the left side. On careful examination it seemed to proceed from near the arches of the vertebræ. There was no pus found in the muscles of the dorsal region. On opening the vertebral canal, pus was seen lying between the dura mater and the bone from the sacral termination of the canal to about the level of the second cervical vertebra. The pus was similar to that found outside the canal, somewhat thick, and of no particular odour. It was limited almost entirely to the posterior part of the dura mater, and was most copious in the lumbar region and at the upper part of the dorsal and lower part of the cervical regions, corresponding to the cauda equina and the two enlargements of the cord. On opening the dura mater, the other membranes of the cord were seen to be congested, but presented no sign of inflammatory exudation. The cord itself showed no abnormal appearance whatever. A careful examination was made of the bones of the vertebral column, but no disease was found. Similarly no abscess formation, other than those described, was discovered in the tissues adjacent to the

[1] THE LANCET, vol. i. 1879, p. 836.

vertebræ, or in any other part of the body. The brain and its membranes were perfectly healthy. The state of the other organs of the body need not be detailed, since beyond the general effects of high temperature nothing abnormal was seen.

There was, therefore, suppuration between the vertebræ and dura mater limited to the posterior part of the membrane. The relation of the external abscess formations to the suppuration inside the spinal canal cannot, in this case, be considered doubtful. One cannot believe that two suppurations, one in the lumbar and the other in the cervical region had formed primarily on each side of the vertebral column, and had both pierced the spinal canal. The rational explanation is that the spinal suppuration, being most intense in the neighbourhood of the cervical lumbar enlargements, had here made its way between the laminæ of the vertebræ amongst the muscular planes. The interest of the case is mainly pathological. Yet there may be noted amongst the clinical features the presence of excessive perspiration, together with an extremely high temperature and the blueness of the skin of the extremities. In Dr. Spencer's case there was also excessive perspiration, and the skin of the chest and abdomen showed a purplish mottling. The absence of cerebral inflammation and symptoms is probably explained by the much firmer attachment of the dura mater to the bone in the upper cervical region, approaching to the condition of the cerebral dura mater. This anatomical formation would probably hinder the spread of inflammation.

Seymour-street, W.

ACUTE INTESTINAL OBSTRUCTION; EARLY OPERATION; SUCCESSFUL RESULT.

BY W. J. PENNY, F.R.C.S.,

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IN November of last year Mr. Luffman of Bristol kindly asked me to operate for him on a case of acute intestinal obstruction. The patient, a healthy, well-nourished boy of four, had an attack of diarrhœa on Nov. 2nd. While straining at stool he complained of a sharp pain in the abdomen. After that he had frequent desire to defecate with straining, but passed no motion. In the course of a few hours sickness supervened, primarily of the contents of the stomach; the vomiting increased in frequency and intensity, and the ejected material gradually assumed stercoraceous characters. When I saw him on Nov. 4th his countenance was pale, with dark rims under the eyes, and he had an anxious, pained expression. He was very restless, tossing about the bed and complaining of pain in the abdomen. His tongue was furred and rather dry. Pulse 136. The abdomen was flaccid, with a very slight appearance of fulness in the right iliac region. There was no particular abdominal tenderness except at this part. The appearance of fulness extended diagonally from the right flank towards the spine of the pubes.

Mr. Luffman and Dr. Newnham of the General Hospital (who gave the anæsthetic) examined the rectum for me; both found it clear, but both described a feeling of fulness in the right side of the pelvis. The abdominal symptoms beyond the constipation and sickness were not well marked. An exploratory operation was decided on, the chief grounds for this being the sudden onset of the symptoms and the appearance of the patient, who had previously been in robust health. After this had been settled the patient vomited again, the material being decidedly stercoraceous. A two-inch incision was made in the middle line, and the finger passed at once to the right iliac fossa. A tangled mass of intestine was met with, and something was felt to slip, giving me the impression that the lesion was an intussusception, though the shape did not accord with this. To be quite clear, I brought the mass to the surface, and then found that about ten inches of the lower part of the ileum had passed through a hole in its own mesentery and subsequently become twisted on itself. The strangulated part was of a darkish-claret colour, but retained its lustre. It was easily replaced, and the abdominal wound sutured. The entire operation lasted less than ten minutes. In the evening the patient's pulse dropped to 100. The temperature, which before operation was subnormal, rose to 100° F. The sickness ceased.

On Nov. 5th the boy's expression was more natural; pulse 100; temperature 99°. He had passed a good night, and had not vomited since the operation. The bowels had not been opened. There was no abdominal tension, pain, or marked tenderness. From this time he progressed rapidly towards recovery. The bowels were opened on the fourth day. On the seventh day the wound was dressed, and all stitches removed. On bidding him adieu, he answered my farewell greeting with a lively childish retort—a very satisfactory indication of restored health. There was an obscure history of a fall from a ladder a few days before the illness. The rent in the mesentery however, did not give me the impression of being a recent lesion, as the edges were rounded. The patient was in such a weak condition that I completed the operation as quickly as possible.

The case illustrates the value of early operation. About a fortnight afterwards I had occasion to make a post-mortem examination, on a case of intestinal obstruction, at the hospital. The patient had been treated for a fortnight by medicines and applications to the abdomen, evidence of which existed in the blistered condition of the skin of that region. She was admitted to the hospital under the care of my then colleague, Dr. Markham Skerritt, a few hours only before she died. In this case the abdomen was also flaccid. The lower part of the jejunum and almost the whole of the ileum had become strangulated under a thin fibrous band passing from the lower part of the jejunum to the ileum, two inches above the ileo-cæcal valve. Evidence of old pelvic cellulitis existed; the left ovary was adherent to the uterus, suppurating and discharging pus through a sinus which existed between it and the rectum. The undistended condition of the abdomen in this case was probably due to the lesion involving the intestinal tract at such a high level. The duodenum and upper part of the jejunum were rather distended, and the rest of the intestines collapsed. Before opening the abdominal cavity, I passed my finger through a small median incision and came at once on the band. This case could easily have been remedied by operation, and for lack of it the patient died. One so often hears of cases in which the diagnosis of some obscure abdominal condition is only cleared up on the post-mortem table that I do not think it is sufficiently appreciated that an exploratory operation through a small incision, with antiseptic precautions, is often less hazardous than delay. In many of these cases delay means death, while the risk of an exploratory incision is infinitesimal. In the earlier stages, before peritoneal effusion and intestinal distension have occurred, operative measures are comparatively simple, the finger can be passed freely round the abdominal cavity, without embarrassment from either the mechanical impediment caused by the distension or the stickiness of the intestines and peritoneum, and the operation can be completed in a few minutes—a very important point. When these troublesome conditions are present operation is difficult, and enterotomy has frequently to be resorted to as a palliative measure, instead of the more satisfactory plan of removing the primary cause of the trouble.

Clifton.

DISORDERS OF SPEECH IN THE INSANE.

BY LLOYD FRANCIS, M.A., M.D. OXON.,

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I HAVE selected for report three cases illustrating aphasic phenomena occurring in asylum inmates, which appeared to present some features of interest. The investigation of such morbid conditions, when manifested by an insane individual, is sometimes far less easy than in the case of a person of sound mind. In the former it has seemed difficult to separate the mental symptoms from those properly attributable to physical causes: to judge, for example, how far an aphemia may be merely the outcome of delusion, how far it may be the manifestation of damage to speech centres; to discriminate between inability to comprehend spoken or written language due to defect of memory and general mental failure from true sensory aphasia (word-deafness, word-blindness). In Case 1 one of these difficulties finds, I

think, an exemplification—mental disorder and delusions coexisting with physical conditions such as accompany true aphasia. In Case 3 there were, and are, superadded to the aphasia impairment of memory and defective intelligence, with slow, hesitating, quavering utterance—suggestive of, but apparently not due to, general paralysis. Case 2 derives what interest it possesses from the post-mortem appearances, viewed in conjunction with the persistent character of the aphasia.

CASE 1.—A. B——, aged forty-two, married, manufacturer. Admitted into St. Andrew's Hospital on Nov. 17th, 1885. His previous history was to the effect that a year ago he slipped down a steep flight of steps in his warehouse, striking his head violently. There was no evidence of fracture, but severe concussion, and his life was at first despaired of. He had incomplete, though considerable, left hemiplegia. From the date of the accident his speech increasingly failed, and within three weeks of the fall he was entirely wordless. His power of hearing deteriorated in the same gradual manner, ending in total deafness. This latter phenomenon the patient describes in the following words: "Also my hearing left me in the same way, with a peculiarity that I have never yet heard an explanation of—viz., that for about four months after I could not hear anything else I could hear music of any kind. I could hear a piano played, but not a sound if a gun was fired near me. But even the power to hear music gradually left me." Mental symptoms of a marked character accompanied the physical. He had dangerous delusions, one being that he was bound to kill his wife in order to save his own life—which, in fact, he attempted to do. Eventually, after being treated at home for two months, he was placed under certificates and sent to an asylum. During his stay there he improved much, both mentally and physically.

On admission he is described as being stoutly built and well nourished. Pulse 80, regular. Heart sounds healthy; radials slightly thickened. Pupils of average size, equal, active. Face symmetrical. Tongue protruded straight. No evidence of defect of general sensation or voluntary motion. Grasp of hands firm and equal. Gait natural. Knee jerks equal and not exaggerated; in short, there remained no trace of the left hemiplegia. He was completely wordless; and beyond giving vent to an occasional low whistle when surprised, amused, or perplexed, he made no attempt even at phonation. He was master of the deaf-and-dumb alphabet, and answered questions on his fingers rapidly and correctly. He readily comprehended pantomime, could read with intelligence both print and manuscript, and wrote in firm legible hand spontaneously and from copy. Deafness appeared to be absolute. He could not hear the ticking of a watch applied to either ear, and gave no indication of being startled by the slamming of doors or other sudden loud sounds. In his mental condition nothing abnormal could be discovered. He appeared to be entirely free from his former delusions; was grave, calm, and quiet in manner, intelligent in expression, and natural in behaviour. He appeared fully to realise and be contented with his position, and constantly occupied himself in various ways—reading, writing, playing chess and billiards, and attending and taking interest in all entertainments. He described himself as right-handed, but it would be more correct to designate him "ambidextrous"; at billiards, for example (in which he excelled), he would make right-handed or left-handed strokes with equal facility and precision.

He remained under observation for nearly six months, being discharged on May 4th, 1886—mentally, to all appearance, well; with regard to speech and hearing, in precisely the same state as when admitted.

His after-history is rather peculiar. On April 11th, 1887, two years and five months after the accident, he wrote: "Dear Sir,—I think you will be glad to know that on the 1st instant I quite regained my hearing. It came during a fit of coughing at breakfast, caused by a difficulty I had in swallowing my food. It caused me to choke and cough very much, and in an instant I could hear quite well." He further intimated that the aphasia persisted, and at the same time expressed a pious and confident hope of ultimate complete recovery.

In August, 1887, he sent the following further communication: "On the morning of the above date (Aug. 18th), about 5 A.M., I dreamed that a big butcher stood over me with a cleaver uplifted ready to split my head. This gave me a terrible fright and awoke me; and I found I could speak, and did speak, to my wife, and thereby frightened her very much; I also frightened many of my friends when I first went out and spoke to them in the street."

Remarks.—The onset of the aphasia was comparatively gradual, and in time roughly coincident with the loss of hearing. The dates of recovery, however, are seen to be separated by a considerable interval. Deafness disappeared on April 1st; speech was not regained until Aug. 18th; so that during a period of four months and a half the patient, though hearing normally, remained totally aphasic. The recovery of both faculties was effected with equal suddenness, and under the pressure of emotional excitement—in the one case dread of impending suffocation, in the other the horror of a vivid dream. The hemiparesis, though undoubted and considerable at first, underwent gradual improvement; and within a year of the accident no trace of it was discoverable. As remarked above, he was practically ambidextrous. It is possible that delusion, carefully and cleverly suppressed, may have dominated his conduct; but it is certain that, at least during the latter seventeen months of his illness, he was judged by everyone who came in contact with him to be entirely free from mental disorder. He presented on the motor side an extreme degree of aphemia, on the sensory complete deafness. As he himself pointed out, he retained the power of appreciating music for four months after deafness to ordinary sounds had been established.

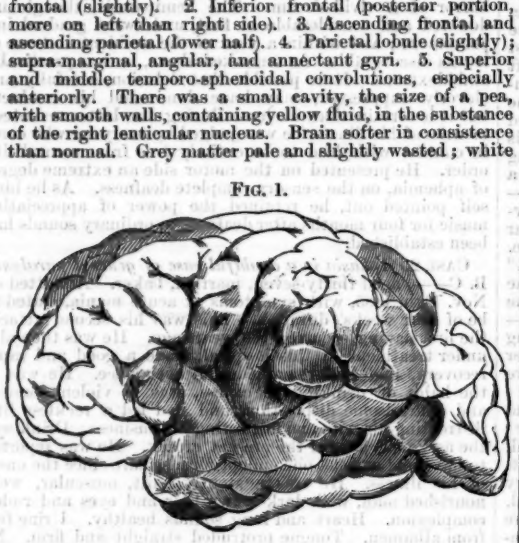
CASE 2. *Aphasia in a doubtful case of general paralysis.* B. C——, aged thirty-seven, married, baker. Admitted on Nov. 11th, 1885, with symptoms of acute mania, stated to be of four weeks' duration. This was his second attack, the first having occurred ten years ago. He was then also under treatment at this hospital, made a good and rapid recovery, and had remained well ever since. He was in the habit of drinking to excess, was of violent temper and quarrelsome disposition, and had led a reckless life, ill-treating his wife and neglecting his business. Drink was the assigned cause of the present attack. He was reported to have had at least one epileptiform seizure since the onset of his illness. He was a stoutly built, muscular, well-nourished man, with dark-brown hair and eyes and ruddy complexion. Heart and lung sounds healthy. Urine free from albumen. Tongue protruded straight and firm. No tremor of lips. Pupils of average size, equal, reacting normally to light and during accommodation. Fundi normal. No affection of speech. No indication of loss of sensation or voluntary motion. He was right-handed. He was extremely restless, wandering aimlessly about, trying the doors, &c.; wild and bewildered in aspect, agitated and apprehensive in manner, shrinking from contact with everyone, and calling out "There are knives about"; intractable and troublesome, but showing no disposition to violence; sleepless and frequently noisy at night; irrational and incoherent in his remarks, and giving random answers to simple questions. He improved steadily at first, and, by the end of three weeks from admission was considerably better. Though still quite irrational, he was entirely free from excitement, amiable, docile, and well-behaved. He helped in the ward with much readiness, ate heartily, and slept well. He exhibited much confusion of ideas and mental enfeeblement, only dimly realising his position. He was placid, contented, and good-humoured, but did not give expression to any exalted ideas.

On Dec. 13th he was reported to have had a "seizure," and was found to have lost power in his right arm, which lay limp and helpless. Face drawn to the left. No apparent loss of sensation or paralysis of the lower limbs. Knee-jerks active, equal; no ankle clonus. There was, in addition, aphasia, in the first instance complete, not a single articulate sound being uttered. He regained the power of speech to a limited extent during the ensuing forty-eight hours; but from the date of the apoplectic seizure to his death, two months later, he exhibited definite aphasic symptoms. Most of his replies to questions consisted of unintelligible gabble. Occasionally he would give utterance to a sentence with one or more words wrongly pronounced—as "lays" for "days." Rarely he enunciated a phrase correctly. A very constant expression of his, repeated on diverse occasions, was "Pretty well, thank you." He acquired power in the right arm and side of face within a few days of the attack. A month later he had a second paralytic seizure, affecting the left arm and left side of face. This was succeeded in a few hours by a series (a dozen or more) of violent epileptiform attacks, the fit beginning always in the left arm, with deviation of eyes to the

left; finally, as a rule, becoming general. The paralysis, as before, was transient. He now passed again into a state of excitement, rolling about the floor of a padded room, noisy at night, making unintelligible sounds, or shouting loudly, frequently grinding his teeth. On Feb. 17th he again had a succession of strong fits, the convulsions beginning in the right arm and becoming general. He died comatose on the 18th.

Necropsy.—Cranial bones extremely thick and dense. About eight ounces of serous fluid escaped from the cranial cavity. The membranes were thickened, more opaque than normal, and extensively adherent to the summits of the following convolutions on both sides: 1. The superior frontal (slightly). 2. Inferior frontal (posterior portion, more on left than right side). 3. Ascending frontal and ascending parietal (lower half). 4. Parietal lobule (slightly); supra-marginal, angular, and annectant gyri. 5. Superior and middle temporo-sphenoidal convolutions, especially anteriorly. There was a small cavity, the size of a pea, with smooth walls, containing yellow fluid, in the substance of the right lenticular nucleus. Brain softer in consistence than normal. Grey matter pale and slightly wasted; white

FIG. 1.



matter œdematous. No gross lesion in pons, medulla, or cerebellum. Basal arteries, cranial nerves, and sinuses apparently healthy. (Fig. 1.)

Remarks.—Recurring epileptiform attacks, with transient paralyses, and latterly frequent grinding of the teeth, were the only symptoms observed during life at all suggestive of general paralysis. The pupillary phenomena were throughout normal. There was no tremor of tongue or lips, no quavering utterance, no difficulty in swallowing—none of the more striking and usual physical manifestations. His mental state alternated between acute maniacal excitement and placid secondary dementia. There was no evidence of self-exaltation or grandiose ideas. Yet the brain, post mortem—with extensive worm-eaten areas arranged in rough symmetry over the surface of both cerebral hemispheres,—afforded an unusually good illustration of the familiar morbid changes. The lesions were, generally speaking, more marked on the left than on the right side; the left inferior frontal gyrus, in particular, showing a more extended and deeper adhesion than the corresponding right convolution. Transient aphasia, with or without temporary hemiplegia or monoplegia, is, of course, not uncommon in general paralysis. But I am not acquainted with an instance of impairment of speech persisting as in this case.

CASE 3. *Motor aphasia, with some symptoms suggestive of general paralysis.*—C. D——, aged thirty-one, married, jeweller. Admitted on June 6th, 1887. First attack of one month's duration; cause unknown. There was a history of primary syphilis eight years ago. Twelve months ago he had an apoplectic seizure, and has ever since been under treatment for right hemiplegia with aphasia. Mental symptoms developed about four weeks before admission.

On admission he presented no nodes, scars, or other evidence of past syphilitic mischief. Pupils equal, reacting well to light and during accommodation. Fundi normal in appearance. The right side of the face was more wrinkled than the left when the patient smiled. Tongue steady, protruded straight. There was quivering of the lips during speech. His utterance was impaired, slower than normal, with pretty frequent slurring, thickness, or tremor. He also made various errors in the use of words—e.g., saying "wife's wife" instead of "wife's father"; "I haven't any objection any it," instead of "haven't any objection to it"; and when he attempted to express his ideas in writing, he made so many blunders in spelling and arrangement of words and phrases as to be almost unintelligible. For instance, in a note to one of the medical officers, complaining that certain articles of wearing apparel had not been given him by the attendants, he says, "Mr. Robbortson. Dear Sir,—How it be can altered. I have for three days collars, and even kept all studs, and there is (for use) great great use to me, because the pins I think. I hope this favour be greater and worry me." Grasp of hands strong and equal. Gait brisk, but right leg thrown out more stiffly than the left. Left knee jerk about normal; right distinctly exaggerated, and there was slight ankle clonus on that side. Handwriting firm and good. No disorder of sensation, or sign of muscular wasting. Heart and lung sounds healthy. Radial arteries not thickened. Urine free from albumen. Mentally he showed good powers of memory and average intelligence, but exhibited confusion of ideas and want of coherence in his conversation, relating detached incidents, and enlarging upon what "he" or "she" said or did without giving any clue as to what he was talking about. He appeared to be in good spirits, and on excellent terms with himself—claiming to be very skilful in his trade, able to prosper without the aid of money &c., and volunteering the information (known to be incorrect) that he had invented a patent electrical apparatus by which he was going to make a fortune rapidly. He was fanciful, unduly excitable, and emotional; restless at night. His excitability culminated, soon after admission, in an attack of acute mania, with hallucinations of sight and hearing, extreme restlessness, noisy excitement, and sleeplessness, which persisted more or less for six weeks, and left him much deteriorated mentally and physically, irrational, wayward, and irritable, shouting and swearing on slight provocation; faulty in habits; more definitely aphasic, and with more impaired utterance.

The only other noteworthy incident in his case was the subsequent occurrence (Sept. 23rd, 1887) of a rapid series of seven severe epileptiform fits. In the first six the left side was mainly affected, and there was deviation of the head and eyes in that direction. During the seventh the right side was chiefly convulsed, with right-sided deviation. Pupils dilated, inactive; slight nystagmus; limbs flaccid in the intervals of the fits; breathing stertorous. This attack was followed by temporary paresis of the right upper limb, and transient total aphasia.

He is still an inmate, and at present is in a quiet stationary condition. He is docile, contented, and well-behaved; correct in habits; clean and tidy. His mental powers are enfeebled. He smiles in a vacant childish way when spoken to, and exhibits impairment of memory. He reads, attends morning chapel, and takes regular exercise. His utterance is extremely slow, halting and quavering; there is marked tremor of lips during speech, but the tongue is protruded straight and firm. He has been treated with antisyphilitic remedies since admission—first iodide of potassium with bark, and subsequently (since the epileptiform attack in September) mercury. The exhibition of the latter drug has been attended with benefit to his physical state. He has gained greatly in weight, and is now robust and healthy-looking.

The following is a summary of his present condition as to speech, reading, writing, &c.:—

Speech.—His expression and gestures indicate that he understands all that is said to him. He never volunteers a remark, though he makes strenuous efforts to reply to the questions put to him. The following are some of his answers: "How are you to-day?" "Oh, fairly, fairly, fairly." The word "well" having been repeated to him two or three times, he succeeds at length in saying "fairly well." "Have you been out to-day?" "Yes, morning." "What morning?" "Oh, *morning*, MORNING!" After similar prompting, he bring out "this morning." "When did anyone come to see you last?" "No, no! Oh, no! Friends, not any, any!" (shaking his head). "How old are you?" "Twenty." "You mean thirty?" "Yes, thirty." "Are you a hundred?" "Oh, no" (smilingly). "Are you twenty?" "Yes, twenty." Endeavouring to reply to the question, "Where do you usually walk?" he gave utterance to a series of unintelligible sounds and syllables, the words "front" and "outside" only being distinguishable; finally making a diagram to illustrate (very imperfectly) the grounds in which he takes daily

exercise. Asked "Do you know what place this is?" he answers, "Oh, yes," in a confident tone; but he entirely fails to give the name "St. Andrew's Hospital." He repeats the words "fairly well" after two or three promptings; immediately afterwards, however, he is unable to complete the phrase, saying only "fairly, fairly," as before. He fails at "Constantinople," repeating the syllable "Con" several times, but getting no further. "Birmingham" he pronounces "Birmum-um-um-um"; but he succeeds in enunciating the three syllables of the word repeated slowly and very distinctly. "Poker" he calls "poter"; "box" becomes "bots." Shown a pen and pencil, he names them correctly, but an ink-bottle he fails to give a name to. Similarly with a table; asked "Is it a bed?" he answers, "No." "Is it a ladder?" "No" (smilingly). "Is it a table?" "Yes, a little table." He calls attention to the snow lying on the ground outside, but he cannot give it a name. Asked how deep it is, he says, "It is three parts of a ——" (pointing to his foot). "Match-box" he names correctly, after prompting by two or three repetitions of the word "match."

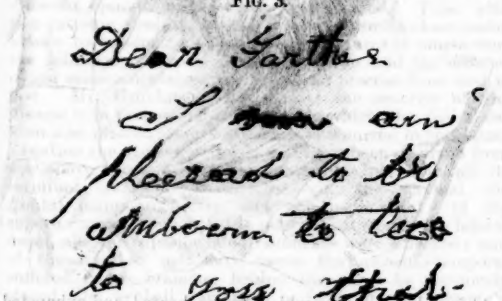
Reading.—He reads slowly and with much apparent effort the following passage: "Under the failure of this debtor, who was formalalaly (formerly) governor of New South Ways (Wales), and has been for fifety (fifty) years in the servisisisis (service) of the Foreign Officisisis (Office)." "Law Intelligence" he reads "Law Intell-tell-tell-tell." Shown a column of advertisements, he points out London, Brighton, and Oxford as names of places where he has been.

Writing.—The facsimile in Fig. 2 represents the results of

FIG. 2.

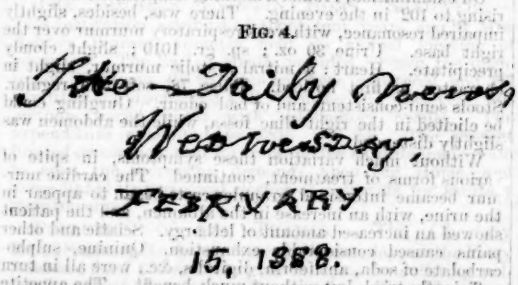
efforts occupying half an hour or more, in obedience to a request to write a letter to his father. That in Fig. 3 was

FIG. 3.



written from dictation ("Dear father, I am pleased to be able to tell you that I am better.") very slowly and

FIG. 4.



laboriously, with frequent halts. The facsimile in Fig. 4 was copied from the heading of the *Daily News*, Feb. 15th, 1888. The copy is seen to be executed partly in manuscript, partly in printed characters—"February" entirely in the latter. He can read this very slowly, and gives indications of comprehending its purport.

Remarks.—The aphasia appears to be mainly, if not exclusively, motor (a high degree of aphemia with motor agraphia). Present to an appreciable extent on admission, it has since been throughout progressive, marked deterioration being observed to follow both the attack of acute mania and the later epileptiform seizure. The tremor of lips, slow quavering utterance, and epileptiform fits suggest general paralysis. On the other hand, pupillary and other symptoms are entirely absent; whilst there is a history of syphilitic infection, and, of late, definite physical improvement under mercury. Exaggerated knee jerk and clonus are still present on the right side.

Northampton.

A PRACTICAL POINT IN CONNEXION WITH PRIMARY VACCINATION.

BY JAMES NIVEN,
MEDICAL OFFICER OF HEALTH, OLDHAM.

IT has been a matter of some discussion how so well vaccinated a town as Sheffield should have suffered from such a severe outbreak of small-pox. One cause has no doubt been the absence of a system of compulsory notification of disease. It is quite possible, I think, that the high proportion of vaccinated persons protected by only one vaccination may have acted in conjunction with the absence of notification. I have always regarded the possibility of small-pox being propagated as a result of mild ambulant cases of small-pox as a theoretical possibility, and practically during the recent outbreak in Oldham it has proved a matter of serious moment. A certain number of medical men in practice have probably never seen a case of small-pox, and while the great majority of these would at once recognise most cases of unmodified small-pox, it is little wonder if they fail to see small-pox in the trivial and atypical cases which come before them. Not only so, but the patients themselves, suffering only from a trifling illness, which disappears with the appearance of the eruption, do not think of seeking advice. It may thus be a question whether, given general efficient compulsory notification, we are safer with the partial protection we now enjoy than we should be if the population were entirely unvaccinated. This question could only arise, however, if compulsory notification were universal, so that one town should not have to suffer for the absence of safeguards in another. The logical outcome of the position is either in universal compulsory notification, extending both to medical men and householders &c., or in an enforced second vaccination at the age of twelve, and even of a third, should it prove necessary. In either case we should be interfering with the liberty of the subject, and by making compulsory notification general we are bound to occasionally come into collision with parents and relatives. So great, however, is the fear of small-pox, that the difficulty is not so much felt with regard to this disease as most others. It is a question whether the enforcement of a second vaccination could be carried in this country, still less of a third; and it may even be a question whether so great a stretch of paternal legislation is consistent with the genius of the people.

The number of small-pox cases which have come under my notice since the beginning of the outbreak in December last is 76. In every case the most careful inquiries have been made as to the origin of the attack, and the source of infection has been made out in 62; but in 14 instances absolutely no clue could be obtained, although the possibility of the patients having come across previously known cases was carefully considered. It is true that most of these had been at places of public resort, such as public-houses; but we may safely infer that in the majority of instances the infection was derived from mild cases, which had either been overlooked altogether, or had been so mild as to escape detection by people other than the affected person.

Some of the cases in which the source of infection was discovered are also instructive.

1. A child three months old was admitted into the Small

pox Hospital with a discrete attack. The mother was found to have had a modified attack of small-pox, which had not been diagnosed.

2. A girl aged twelve, seen on suspicion, was found to be suffering from a very mild attack of small-pox. No medical man had been consulted. The father refused to admit that it was small-pox. She was removed to the hospital. Two other cases subsequently occurred in the same house.

3. This case has no direct bearing on the point in question, but is of interest otherwise. E. S——, aged fifteen, was removed suffering from modified small-pox. M. S—— was also removed, believed by me to be suffering from chicken-pox, and was vaccinated. The vaccination took, and she did not contract small-pox. One of these girls had small-pox and the other chicken-pox exactly a fortnight after a previous case had developed what the medical attendant regarded, no doubt correctly, as chicken-pox. There is some evidence that chicken-pox cases become more numerous when an outbreak of small-pox is beginning, and it has been thought possible that some connexion existed between them. The above experience shows that chicken-pox is radically distinct from small-pox, and also how easy it would have been either to draw a false conclusion as to the connexion or to misjudge the nature of these two very distinct eruptions.

4. A man aged thirty-two contracted a modified attack of small-pox, which was undiagnosed, and led, as far as could be ascertained, to three persons contracting small-pox from him—a child, a friend who visited at his house, and a female operative working in the same room with him. His attack was ascertained from seeing the friend, but he had distinct marks of the eruption, with a history of the initial illness of small-pox. He was removed to the hospital and placed among small-pox patients without contracting the disease. These particulars are given because the case was denied to be one of small-pox.

5. The next case is that of five patients moved from one house not above 400 yards from the Small-pox Hospital. Four of these had occurred about the same time, and I satisfied myself that it was almost impossible that they could all have been exposed together to infection at any meeting outside the house. The hospital then came under review. But I fortunately examined the aged grandmother, and found that she had distinct marks of what had been a very mild, evidently modified attack of small-pox. A clear history was also given of the initial illness, which, however, had not been severe. No medical man had been consulted about the grandmother.

6. A woman aged twenty-one had a modified attack of small-pox. They refused to admit that it was small-pox, and said that a medical man, consulted after the one who reported the case, denied that it was small-pox. A case of a child occurred about the same time two doors off. Passing from one house to the other was a young man, who had one or two marks of small-pox on him, and gave a clear history of initial illness a fortnight previously, with eruption two days after. The child of the first case subsequently took unmodified small-pox and died.

7. Three cases were reported to me of children who had not been under a medical man. In all only the marks of eruption without scabs remained. In two the distribution of the marks and their varying size indicated chicken-pox. In the third only one or two marks were found, but there were none on the chest, and an initial illness had occurred two days before the eruption came out. The case was, no doubt, one of small-pox, modified by vaccination, which had been overlooked.

These examples will suffice to show that it is no mere chimera that the amelioration of small-pox by primary vaccination is liable to become a factor in the propagation of the disease, in the absence of the renewal of protection. To what extent it will be so depends on the character of the people, and on the amount of experience of all the medical men of any given district. The remedy, to a great extent, lies in the extension of compulsory notification, which, in my opinion, should rest mainly in the hands of medical men. I should not, however, like to say that if there were no vaccination we should altogether escape these difficulties of diagnosis. In one of my recent unvaccinated cases there were only two pocks, which, however, were typical, and I have seen one case of unmodified small-pox abort just like a modified one. Jenner, in the record of his experience, mentions that he knew of a district assailed by small-pox where the cases were so mild that children were brought from neighbouring places that they might have the disease in the same form. Still it remains that the amelioration produced by vaccination is not an unmixed advantage.

Oldham.

SEVERE ERUPTION OF BILATERAL HERPES OPHTHALMICUS,

OCCURRING IN THE COURSE OF A CASE OF CHRONIC PNEUMONIA, WITH DIFFUSE INTERSTITIAL NEPHRITIS.

By WM. ROBERTSON, M.D.,

SURGEON TO THE THROAT AND EAR HOSPITAL, NEWCASTLE-ON-TYNE.

BRIEFLY stated, the history of the case previously to the appearance of eruption is as follows.

M. M——, aged sixty-two, a tall bony man, had only passed through one serious illness, and that was an attack of pleurisy of the left side previously to the present attack. Fifteen years ago his life was refused by an insurance company on account of heart disease, but beyond one or two fainting attacks he betrayed no serious symptoms of cardiac affection. The only other point attracting attention was an undue somnolence, which became overpowering when he was at rest, as for example, going to sleep in tram-cars and when at leisure at home. Habits: total abstainer; diet principally milk and farinaceous food. The present illness was no doubt induced while assisting his men at the repair of an

old foul drain, during which he got heated and exhausted, and while in this condition lay down on the grass to rest. Languor, debility, fever, and want of appetite supervened, and after fourteen days' suffering from these I saw the case. The house in which he lived was, besides, in an insanitary condition.

On examination, I found a morning temperature of 101° F., rising to 102° in the evening. There was, besides, slightly impaired resonance, with weak respiratory murmur over the right base. Urine 30 oz.; sp. gr. 1010; slight cloudy precipitate. Heart: a mitral systolic murmur, slight in character, as first noticed. Pulse 78, soft and regular. Stools semi-consistent, and of bad odour. Gurgling could be elicited in the right iliac fossa, while the abdomen was slightly distended.

Without much variation these symptoms, in spite of various forms of treatment, continued. The cardiac murmur became intensified, granular casts began to appear in the urine, with an increase in the albumen, and the patient showed an increased amount of lethargy. Sciatic and other pains caused considerable exhaustion. Quinine, sulphocarbolate of soda, antifebrin, digitalis, &c., were all in turn sufficiently tried, but without much benefit. The appetite meanwhile was such as to keep up fair nutrition. After

three months of such symptoms, associated with slight feelings of chill, a herpetic eruption appeared, ushered in quietly, and without pain or much itching. The vesicles appeared in a thickly-set patch under each eye, extending to the external canthus and internally well up the bridge of the nose on each side; round the palpebral margins, amongst the cilia, and thickly set on each eyebrow; several on each frontal region; several vesicles behind each ear; three on the right helix and over the upper lip; one on the nose over the bridge, and one on the right side of the tip of the nose. There was soon associated with the specific eruption considerable cutaneous disturbance, with swelling of the eyelids to absolute closure. The eruption was characterised by the usual multiformity of the herpetic lesion—here vesicular, there bullous, and again pustular; all present simultaneously. The eruption under the lower lids and on the eyebrows broke down on the third day with the formation of foul ulcers discharging freely. These had fairly cleared by the fifth or sixth day, exposing corium papillæ. Throughout the attack no ocular symptoms of any gravity appeared. The conjunctivæ became suffused slightly. Vision and tension and sensation of the eyeballs remained normal throughout the attack. This lasted in all about three weeks, the only traces of its presence afterwards being a rugged scaly state of the cuticle under each eye. During the attack the patient's condition underwent very little change. In the succeeding week, however, uncontrollable hiccough, with rigors, occurring nightly, set in, the temperature rising from 102° to 103°. The albumen in the urine increased in quantity, being 35 oz.; sp. gr. 1010; granular casts. Shortly afterwards vomiting became a constant symptom, and shortly terminated the case.

Remarks.—The post-mortem examination generally bore out the diagnosis which heads the article, and was conducted by Dr. Drummond of Newcastle, who kindly saw the case with me once or twice during its progress. As to the eruption, the clustering together of the vesicles into groups, and its appearance on other parts in the course of the nerve distribution, all so characteristic of herpes, established the diagnosis at the onset. Subsequently viewing the lesions when the vesicles became confluent, purulent, and broken down, leaving large freely discharging ulcers under the eyes and on the upper orbital boundaries, a different opinion might have been formed. This, with the extreme swelling of the lids, presented a close resemblance to erysipelas. The striking features of course were the bilateral occurrence of the eruption and the absence of any serious ocular sympathy in the process from first to last. Mr. Hutchinson states that the severity of the disease is in proportion to that with which the tip of the nose was affected; and if the disease occurred in the latter situation the eye suffered. It will have been observed from the above account that the ophthalmic nerve in all its terminal branches was affected—viz., the lacrymal, the frontal (supra-trochlear), and the oculo-nasal; of the superior maxillary nerve, the inferior palpebral, the lateral nasal, and the superior labial branches were affected; and of the inferior maxillary nerve the auriculo-temporal suffered in its branches behind the ear. As previously stated, the eyeball remained perfectly normal throughout, during the weeks the patient survived, after the attack of herpes had entirely disappeared. At no time was vision at fault; the corneæ remained perfectly clear, with normal tension of globes.

Newcastle-on-Tyne.

THE MOTHERS' LYING-IN HOME, SHADWELL.—This institution, established about four years ago by Mrs. Ashton Warner, recently held its annual meeting of governors. The Earl of Meath presided. Since the opening of the Home, 405 patients had been registered, and 327 admitted and discharged well. During the past year, 103 mothers were treated with satisfactory results. The expenditure amounted to £810 11*s.* 2*d.* The present limited accommodation was represented as quite inadequate to meet the increasing demands upon the Home, and necessitated its periodical closing at intervals for sanitary requirements.

POLLUTION OF THE THAMES.—The Chertsey Rural Sanitary Authority were on Wednesday, at the Petty Sessions, fined £50 and ten guineas costs for suffering polluted matter to flow into a tributary of the River Thames at Chertsey, and £5 in respect of a similar offence committed at Addlestone.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

REMOVAL OF THREE INTRA-UTERINE FIBROIDS BY ENUCLEATION.

By D. MACGREGOR, M.A., M.D. EDIN.

AN urgent summons to attend Mrs. R—— reached me on March 30th of this year. Flooding had suddenly become alarming, and the patient fainted. She is aged forty-seven, the wife of a farm servant, and the mother of six children, four of whom are adults. She is a thin, anæmic-looking woman. For the past two years menstruation had been irregular, occurring on an average once in three months. At these periods she lost much blood and suffered pain. During the two years she had also had difficulty and pain in both defecation and micturition: bowels constipated; micturition frequent. The patient attributed these symptoms to "change of life." Family history unimportant.

I found the patient in bed, blanched and weak. On abdominal palpation there was found a central tumour reaching from the pubes to the umbilicus; the tumour was only slightly painful to the touch, and appeared to be uterine. The abdominal superficial veins were distended. On examination per vaginam, there was felt a smooth globular tumour, large enough to fill the hollow of a hand. The os uteri was widely dilated, and the tumour protruded into the vaginal canal. The tumour was sessile, and was continuous with the posterior lip of the cervix and with the posterior uterine wall. The attachment was extensive. The uterine sound entered the uterus to the extent of six inches and a half; and there seemed to be an impediment, overcome only by some manœuvring after the sound had entered two inches. Ergot, nux vomica, iron, and opium were administered, the vagina was plugged, absolute rest enjoined, and the patient given the most nutritious diet. As soon as the plug was removed hæmorrhage recurred. It was evident that an operation was the only safe course; and the method of enucleation was adopted on the suggestion of my friend Dr. Mitchell Penman, who saw the patient with me.

On April 26th, Dr. Penman having administered chloroform, and the patient having been put in the lithotomy position opposite the only window in the room (in patient's own house), I seized and drew down the tumour with a vulsellum, slit the capsule, and proceeded to enucleate. The process of enucleation was found tiresome to the finger, and we found it convenient to relieve each other; after enucleating as far as possible, separation of the tumour was effected by avulsion. After the first tumour was removed another appeared, and after the removal of this a third presented itself. The three tumours having been removed, the capsule treated, and the uterus washed out, the patient was removed to bed. There was no hæmorrhage. The time that elapsed from the moment the patient was placed on the operating table until she was again in bed was forty-five minutes. On the evening of operation the temperature was 103° F., and the pulse 100; and a sharp attack of bronchitis, to which the patient is subject, kept the temperature somewhat above normal for the first eight or nine days. On the subsidence of the bronchitic attack the patient made rapid progress. She now (May 20th) takes open-air exercise on foot daily, and feels in every respect well. The three tumours together weighed twenty-eight ounces; the measurements, in order of their presentation, were six inches by three, seven and a half inches by four, and six inches by three and a half.

Denholm, Hawick, N.B.

NOTES ON A CASE OF POISONING BY HYDROCYANIC ACID.

By E. M. GARSTANG, M.R.C.S., L.R.C.P. EDIN.

ON July 29th, 1887, I was called in haste to Miss B——, fifty-eight years of age, who was reported to have been suddenly seized with apoplexy. I saw her about 9.25 A.M., and found her perfectly insensible; breathing stertorous and irregular; severe twitchings of face; eyes directed

upwards and towards the right side; slight opisthotonos and tonic spasm of both arms and legs; very slight frothing at mouth; jaws firmly clenched; heart's action slow, laboured, and irregular; pulse imperceptible at wrist; extremities cold and bathed with clammy perspiration. Mustard and hot water fomentations were applied to the legs and thighs, and hot sinapisms over the heart. On inquiring as to what the patient had taken, I was informed that she had had a cup of tea and also a dose of medicine, which had been dispensed on the previous day by a chemist. On smelling the bottle a strong odour of bitter almonds was clearly perceptible. I then asked for the prescription, which I found was as follows:—"R Pot. bicarb., ʒiv.; acid. hydrochl. dil., ʒi.; aquæ ad ʒviii. Allow the effervescence to subside before placing in the bottle. Cap. ʒss. ter in die." However, by an unfortunate mistake hydrocyanic acid had been used instead of the dilute hydrochloric acid. The patient took one dose of the medicine, which would be equal to half a drachm of the B.P. acid, and died one hour and twenty minutes from the time of taking the dose, and about half an hour after my arrival.

Necropsy, eight hours after death.—Body well nourished; no external marks beyond those of already commencing decomposition (the day being unusually hot). Heart somewhat fatty and its muscular tissue friable; odour of almonds distinctly perceptible on opening the pericardium, which contained about an ounce and a half of fluid. Left ventricle found firmly contracted and empty; right ventricle somewhat thin and relaxed, containing about an ounce of dark-coloured fluid blood. The lungs were somewhat congested, and adherent in places to the chest wall; also slightly emphysematous. Liver somewhat congested; friable. Kidneys and spleen healthy. All the viscera of both chest and abdomen were characterised by the peculiar odour of bitter almonds. The membranes of the brain were found considerably engorged, as also the sinuses. But in the brain tissue the puncta were almost imperceptible owing to the anæmic character of the brain substance itself. The cerebro-spinal fluid and brain tissue gave off the characteristic smell. About two ounces of yellowish semi-transparent fluid were contained in the stomach; this was afterwards submitted to analysis, and found to give slight but unmistakable evidence of the presence of the prussic acid.

This case appears to me to be interesting, first, on account of the smallness of the dose, which was followed within about five minutes by complete insensibility, owing doubtless to the rapidity with which the poison became absorbed, the stomach being almost empty at the time of taking the fatal dose; and, secondly, that, the dose being so small, it should afford such conclusive and unmistakable signs of its presence in all the tissues.

Haulgh, Bolton.

A FOREIGN BODY IN THE EAR FOR EIGHTEEN YEARS.

By ALFRED SWANN, M.D., M.R.C.S.,
SURGEON TO THE BATLEY AND DISTRICT COTTAGE HOSPITAL.

THE following case came under my care recently, and may be deemed interesting.

G. I.——, aged twenty-seven, consulted me in May, complaining of irritability of the fauces, particularly on the right side, and deafness on the same side. He said that eighteen years ago, when a child, he was playing with a piece of slate pencil, and poked it into his ear. He went to a medical man, who attempted to remove the body, but did not succeed. Deafness gradually supervened, and unless some conducting medium was used the man could not detect sounds at all. On examining the ear with a speculum, it was found to contain cerumen, but nothing else could be seen. A few syringefuls of warm water and carbonate of soda soon dislodged a long plug of what appeared to be cerumen, but embedded in this was a piece of slate pencil half an inch long, with its rounded end towards the drum of the ear. Hearing was immediately and perfectly restored, and on examination the tympanum was found to be perfectly whole and healthy. The throat symptoms cleared up in the course of a few days.

This case seems to be interesting as showing the toleration which the auditory canal may have for foreign bodies, and also on account of the sympathetic irritation of the throat.

Batley, Yorkshire.

A FORM OF UMBILICAL SINUS OCCURRING IN ADULTS.

By ALEX. G. R. FOULERTON, M.R.C.S., L.R.C.P.

THE form of umbilical sinus to which I would draw attention, although doubtless frequently met with in practice, has not, I believe, been generally recognised in surgical works. Umbilical fistulæ of greater or less extent depending upon non-coalescence of the urachus or omphalo-mesenteric duct are described. So also a fistula leading down to an abscess cavity within the abdomen, usually seen in children and often in connexion with diseased mesenteric glands. Biliary and fæcal fistulæ may in like manner find their point of discharge at the same spot. The sinus now under consideration, however, does not extend deeper than the abdominal walls; it is merely the normal umbilical depression converted into a suppurating cavity. Its chief clinical characteristic has been a marked obduracy to treatment, depending probably on the fact that its exact pathology has not been understood. The cause of the irritation in four cases of this complaint, all occurring in women, which have come under my notice has been the same—viz., retained sebaceous matter. The presence of a hard plug of mingled dirt and sebaceous matter can frequently be demonstrated in the umbilicus, especially in persons who give not due regard to personal cleanliness. It will vary in size from a hemispherical mass the size of a small split-pea, lying deep down in the umbilicus, to a larger concretion filling the whole depression, and presenting itself as a black disc, its upper surface being flush with the surrounding skin. This being so, it is easy to conceive that such a plug may set up considerable irritation, and the suppuration so induced is likely to continue until the cause has been removed. Bearing this in mind, the treatment is simple. The cavity should first be thoroughly scraped out, particular attention being paid to the deeper parts; the application of nitric acid will then ensure a healthy granulating surface. For the scraping, a most convenient scoop may be extemporised by inverting a pen-nib in its holder. The cases thus treated have all healed rapidly after having already resisted various other methods. In one of the cases, after application of nitric acid the sinus still refused to heal. It was then found that what had been mistaken for a large granulation at the bottom of the sinus was in reality an encapsuled mass of sebaceous matter, presumably an obstructed follicle. On this being turned out, the whole thing was well within a week. There is yet another form of umbilical sinus caused by the spreading downwards of eczema, but as to the treatment of this I have no experience.

St. Bartholomew's Hospital, Chatham.

SYMPTOMS OF POISONING BY ÆTHUSA CYNAPIUM (FOOL'S PARSLEY).

By E. SCOTT SUGDEN, M.B.,
SENIOR HOUSE SURGEON, BIRKENHEAD BOROUGH HOSPITAL.

JOSEPH P——, aged nineteen, applied at the Birkenhead Borough Hospital at 8.30 A.M. on June 29th. He stated that on the previous evening he gathered by the hedgeside several leaves of a herb he thought to be tansy. Before going to bed he ate a few of these leaves, and about 3 o'clock in the morning he began to vomit; this vomiting continued for three or four hours off and on till he came to the hospital. When I saw him at 8.30 A.M. he complained of nausea and headache, with a burning sensation about the mouth and throat. The pupils were widely dilated, and the pulse very quick and feeble. The patient was put to bed, and no treatment ordered beyond a five-grain calomel powder and an ounce of castor oil. By the next morning he was quite well. The lad brought with him a piece of the herb, which was undoubtedly fool's parsley, and the case is interesting in view of the experiments made some years ago by Dr. John Harley (St. Thomas's Hospital), which were supposed to prove that the herb was completely harmless.

Birkenhead.

GREAT NORTHERN CENTRAL HOSPITAL.—The Prince and Princess of Wales have now arranged to open the new buildings on Tuesday, July 17th, at 4.30 P.M.

A Mirror of HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

ST. THOMAS'S HOSPITAL.

A CASE OF ŒSOPHAGOTOMY FOR AN IMPACTED ARTIFICIAL PLATE; RECOVERY; REMARKS.

(Under the care of Mr. H. H. CLUTTON.)

THE following case presents several points of interest, and is an example of an operation and the after-treatment required which from its rarity is seldom recorded. The shape and size of the plate made its detection with the œsophageal forceps difficult; it was probably flattened against the posterior wall whilst they from their curve passed in front of it. It will also be noticed that the length of incision required was unusually short.

A woman, aged thirty-nine, was admitted on April 28th, 1888, with the following history. She was in the habit of wearing a vulcanite plate, which carried one central incisor tooth, and was kept in position by two hooks. It had latterly been reduced in size by several small pieces having been broken off, and was consequently very easily displaced. Two days before her admission, whilst eating a hard crust of bread, she accidentally swallowed the artificial plate. She was unable to take any solid food afterwards, and could only swallow fluids, such as tea, with great difficulty and pain. On the advice of her neighbours she took castor-oil, but she did not consult a doctor before she came to the hospital two days after the accident. Mr. Bidwell, the house-surgeon on duty, found on examination with forceps and coin-catcher, that the foreign body was fixed to the walls of the œsophagus opposite the cricoid cartilage, and that any attempts at drawing it towards the mouth caused such intense dyspnœa as to make it impossible to proceed, even if he had otherwise thought it safe to make any prolonged effort at extraction. The patient was therefore admitted into the hospital.

After the administration of an anæsthetic, Mr. Clutton introduced a pair of œsophageal forceps in order that he might be quite sure of the exact position of the foreign body. Again and again the forceps passed beyond the artificial plate without giving any indication of its presence. This was easily explained afterwards by the small size of the artificial plate, but at the time it gave the impression to the operator that the foreign body had passed onwards down the œsophagus. By external manipulation there was an abnormal swelling to be felt opposite the cricoid cartilage, and after several further attempts the foreign body was eventually caught by the forceps, but it was so firmly fixed that it was obviously hopeless to attempt its extraction through the mouth. The operation of œsophagotomy was therefore commenced by an incision two inches in length opposite the cricoid cartilage on the left side of the neck. After drawing the sterno-mastoid and omo-hyoid muscles to the outer side, the carotid sheath came into view and was similarly displaced outwards by a retractor. The œsophagus was then seen at the bottom of the wound, and on introducing the finger one of the hooks belonging to the artificial plate could be felt protruding through the œsophageal wall. After an incision had been made upon the foreign body, there was still some difficulty in extraction on account of the hooks. This was eventually overcome by turning the plate round and disentangling one hook at a time. The superficial incision was not enlarged, as the difficulty in extraction was not due to the size of the plate. The wound in the œsophagus was then carefully closed with three catgut sutures, and a drainage tube being placed in the lower angle of the wound, the superficial parts were brought together with silk, and an antiseptic dressing applied.

From April 20th to May 8th she was fed entirely by nutrient enemata, and, as her chief complaint was then found to be that of thirst, from six to ten ounces of tepid water were injected into the rectum in the intervals between the administrations of the nutrient enemata. She was forbidden to have anything by the mouth, and after the water had been given by the bowel she made much less complaint of thirst. But by May 8th she began to get so discontented at being (as she called) starved that it was found desirable to change the method of giving her nourishment. She was therefore fed by an œsophageal tube from the 8th to the 15th, when, the wound being healed, she resumed the ordinary mode of taking food by the mouth.

On the day after the operation (April 29th) the dressing had to be changed on account of the quantity of the discharge. On the 30th the discharge was almost as copious and offensive, and left no doubt as to the fluid having come from the œsophagus. The dressing was therefore changed to warm boracic lotion every four hours. The discharge continued to be very copious and offensive till May 10th, when two large sloughs were removed from the wound. The skin also became much excoriated. As soon as the sloughs were removed the wound quickly began to close, and was soundly healed by the 15th. The temperature rose to 101·4° on April 29th, but after May 2nd did not reach beyond 99·2°, except on one occasion (the 7th), when it rose again to 100·2°.

The patient left the hospital perfectly well in every respect on May 16th.

Remarks by Mr. CLUTTON.—First let me thank Mr. Stabb, the house surgeon to the case, for the attention and trouble which he took in carrying out the details of the treatment. Although the vulcanite plate was a small one, it was difficult to extract, the hooks being firmly embedded in the œsophageal walls. There is one other feature in the case deserving of notice. An attempt was made to close the wound in the œsophagus with sutures, in the hope that the whole wound might close by first intention; but from the nature of the discharge it is clear that this entirely failed, and the sloughs which were eventually removed must have come from the walls of the œsophagus. No suppuration, however, extended from the wound, which was soundly healed in a little over a fortnight. The method adopted in feeding the patient was of material assistance, in my opinion, in promoting this desirable result; for, had any particles of food escaped from the œsophagus, some suppuration beyond the limited area of the wound might naturally have been expected.

HOSPITAL FOR SICK CHILDREN, BRIGHTON.

A CASE OF INTUSSUSCEPTION OF THE CÆCUM AND VERMIFORM APPENDIX; DEATH; NECROPSY; REMARKS.

(Under the care of Dr. CHAFFEY.)

FOR the following report we are indebted to Dr. Bird, who was acting as house-surgeon.

A. B——, aged three years, was admitted on April 26th, 1888, complaining of pain in the abdomen. The patient was a pale, thin boy, with a somewhat pinched cast of countenance. His mother stated that he had been in about the same condition for six weeks, but had never been a strong child. There was an uncertain history of his having swallowed some kind of button a long time previously. During the ten days previously to admission he had vomited several times. The bowels had acted regularly except for the previous three days, during which time he had only passed a little slime and blood.

On examining the abdomen, an elongated sausage-shaped hardness could be observed, somewhat uneven in outline, situate in the region of the transverse colon, not pitting on pressure, and apparently not tender to the touch. It descended with each inspiration. The abdomen was not preternaturally distended at any part, and was quite symmetrical. A simple enema, consisting of fifteen ounces of soap-and-water, was administered, and belladonna fomentations were applied externally.

April 27th.—Child in a semi-collapsed, drowsy condition; has vomited twice this morning; complains frequently of pains in the abdomen, in the region of the tumour. On examination under chloroform the tumour became less evident in its first position, but there was a distinct swelling in the right hypochondrium, beneath the margin of the liver. The patient was ordered a mixture of ether with three minims of tincture of opium every four hours, together with brandy by the mouth, whilst small enemata of

concentrated beef-tea and peptonised milk were administered every three hours.

28th.—Tumour again evident. Patient not quite so collapsed. Chloroform being administered, a pint and a half of warm milk-and-water was slowly injected, whilst the abdomen was gently manipulated in the region of the tumour. The latter disappeared, with the exception of a body in the right ilio-hypogastric region, feeling very like a movable kidney, though not so defined. The greater part of this injection was retained from 11 A.M. to 2.30 P.M. The child seemed much better; no vomiting. The quantity of stimulants and opium were increased.

29th.—Small quantities of beef-tea and peptonised milk given every hour; brandy increased to three ounces in the twenty-four hours, the patient appearing more collapsed; pupils contracted; motions very offensive, containing undigested milk. Opium diminished, and a little castor oil mixture ordered.

30th.—Blood appeared in the motions for the first time, along with some mucus and undigested milk. Temperature 98·2° to 99·4°.

May 1st.—The tumour has reappeared at its old site; patient very restless and in evident pain. Castor oil mixture discontinued, and opium fomentations substituted for belladonna, as more tenderness and less movement of the abdominal wall created a suspicion of peritonitis supervening. Temperature 98·5° to 102°. At 4.30 P.M. an anæsthetic was again administered, and two pints of warm water were injected, the abdomen being manipulated the while. The tumour disappeared.

5th.—The patient has now continued free from any appearance of the tumour for four days. Lies in a drowsy condition, his pupils being contracted by the repeated small doses of opium. Respiration 8 per minute. Thinner and weaker. The effects of the opium on the respiratory centre quickly subsided under small doses of belladonna tincture, and the patient was able to take small quantities of strong beef-tea with brandy by the mouth, whilst the enemata of peptonised milk and of beef-tea were administered as before every two hours.

6th.—Respiration 18; pulse 120; temperature 98° to 98·8°. Patient still much collapsed.

7th.—The tumour reappeared, but was apparently reduced after the injection of two pints of warm water under ether and chloroform, aided by external manipulation. Small and repeated doses of tincture of opium were recommended. At 7 P.M. the tumour, having again returned, was reduced as before. At 9 P.M. the patient was sleeping; respiration 20; pulse 120. At 11.15 P.M. he was much exhausted, but sleeping quietly. He was taking a fair amount of food and stimulants by enemata.

8th.—The patient became gradually weaker, and died at 2.45 P.M.

Necropsy, made twenty-four hours after death.—Some rigor mortis in the extremities. Toes and finger-tips much discoloured; no post-mortem congestion elsewhere. Small intestines semi-distended with flatus; in some places collapsed, and contracted in others; no general peritonitis. Great omentum drawn over to the right side and fixed down to the parts in the vicinity of the cæcum by firm old adhesions. Here there was also a little flaky, recent lymph; no pus. The place of the cæcum was occupied by a rounded tumour (about three inches by two), composed of the cæcum partly invaginated into itself along with the ileo-cæcal valve, the parts being held in this relationship by tough, rounded, cord-like bands of old adhesions stretching across the fissure between the small gut and the caput cæcum coli. No tail of the vermiform appendix could be discovered, though diligently sought for, but the proximal end of that structure had become inverted, so as to form a little polypoid projection (about one inch in length) into the cavity of the cæcum close to the ileo-cæcal valve; this, moreover, appeared surmounted on a boss-like protuberance of the adjacent part of the caput coli, which was likewise partially inverted by the contraction of the adventitious bands applied to it externally. The mucous membrane covering these projections had become almost gangrenous, being deep purple in colour and softened, and there was a line of demarcation in one direction. The apex of the polypoid protuberance presented a well-marked ostium leading into a tubular cavity, about half an inch in length. A little gritty yellow concretion adhered to its summit, and something of the kind existed in the cavity of the polypoid projection. The cæcum was more roomy than natural; its walls were much hypertrophied. The ascending colon commenced rather abruptly from the cæcum. The coats of this and of the rest of the large bowel were considerably hypertrophied, the rugæ being very marked. There was no ulceration anywhere, and no localised patch of congestion, nor any recent peritonitis along its course. It occupied the usual position. There was no accumulation of fæces anywhere within the large bowel. Some yellow feculent material with mucus existed in the small bowel just above the ileo-cæcal valve. The margins of the valve were of a slate colour, not ulcerated or thickened to any extent, if at all. The orifice was not contracted, being about normal in dimensions. There was no sign of blood having been extravasated into the tissues in its vicinity. The mucous membrane of the Peyer's patch immediately above the valve was swollen, not ulcerated. The cæcum was not very movable, but the adventitious bands were perhaps sufficiently long to allow of the change in its position to be observable apparently during life. The liver was enlarged and fatty. The spleen was also enlarged and congested.

Remarks by Dr. CHAFFEY.—The special points of interest are—1. The unusual condition of parts. The old adventitious bands originated probably in some inflammatory mischief about the vermiform appendix; but I have thought it possible that they may have resulted from an old intussusception. Their subsequent contraction would account for the inversion of the vermiform appendix and adjacent portion of cæcum. One can easily understand how the polypoid projections thus occasioned would act in exciting the intussusception reduced during life. I can find no similar case recorded, notwithstanding the many and excellent papers on the subject. 2. Abdominal section would probably not have afforded any material relief. The obstruction to the passage of fæces was by no means complete at any time, and, moreover, the extreme state of collapse, from which the patient died, almost precluded the idea of further surgical procedure. 3. External manipulation very materially aided the action of the injections per rectum. This was particularly insisted on by Dr. Cheadle in a former paper on the subject. It seems to me a point that should always be remembered, as until this was performed the tumour remained fairly fixed, notwithstanding the bowel was forcibly distended from below.

LIVERPOOL NORTHERN HOSPITAL.

A CASE OF ACUTE GLOSSITIS.

(Under the care of Mr. DAMER HARRISSON.)

FOR the following report we are indebted to Mr. William Permewan, house-surgeon:—

Joseph C——, a lad of fourteen, apprentice to a currier, was admitted on April 20th, 1888. He stated that on April 17th he got wet through and felt chilled, but went home and went to bed shortly afterwards. He remained apparently in good health till the 19th. On that day, while eating his dinner, about 12 noon, he bit his tongue severely on the right side about the middle. He went to his work as usual, but in the afternoon he suddenly felt a pain in his right ear, and to relieve it he put his ear under a tap and let cold water run into it. Most of the water returned, but a small quantity, he says, did not come back for half an hour; none ran into his mouth. The pain was not relieved by this treatment, and in the evening he felt his throat sore and had difficulty in swallowing. However, he seems to have been fairly comfortable when he went to bed. On awakening the next morning (April 20th) at 6 A.M., he had great pain in his tongue, and found that his tongue was very much swollen. He felt weak and ill. At 12 noon he was admitted into the Northern Hospital.

On admission the patient, a rather delicate-looking lad, was evidently very ill. The tongue was much swollen, was protruded about three-quarters of an inch in front of the teeth, and the frænum was pressed forcibly down on the lower incisors and canines. The upper and lower teeth were separated about an inch. The tongue almost completely filled the cavity of the mouth, and was immovable, and no view could be had of the fauces. There was considerable swelling below the jaw, extending to the hyoid bone. The patient was quite unable to speak or swallow, and salivation was profuse. Breathing was carried on almost entirely through the nose, but there was no marked dyspnœa, and apparently no very acute pain. There was a

perforation of the right membrana tympani. Temperature 102°. The patient was at once put into a "tracheotomy tent," with a steam kettle; a linseed poultice was applied under the chin, and five grains of calomel put as far back as possible on the tongue. The tongue continued to enlarge, and at 2 P.M. two incisions were made with a sharp bistoury into the dorsum, half an inch on either side of the raphé, about an inch and a quarter long and a quarter of an inch in depth; they extended forwards quite to the tip of the tongue; they were encouraged to bleed by warm sponging, but only about an ounce of blood escaped. Four leeches were then applied under the jaw, which drew off about two ounces, but the leech-bites continued to ooze for two or three hours, and quite three ounces were afterwards lost. The tip of the tongue was kept moist with glycerine of borax, and poultices reapplied under the chin. The patient was ordered to suck ice, but only very small pieces could be put into the mouth. At 8.30 P.M. a nutrient enema of beef-tea, milk, brandy, and five minims of tincture of opium was administered, and through the night two other enemata were given, beef peptonoids being substituted for the beef-tea. The patient slept very little. Temperature at 9 P.M. 101·2°.

April 21st.—Temperature at 8 A.M. 99°. Tongue much reduced in size; hardly protruded between the teeth. Under the tip there is now seen a sloughy patch, three-quarters of an inch wide, where the tongue had pressed on the lower teeth. The incisions have apparently healed by primary union. The right first lower molar is carious. The patient can now speak with some difficulty, move his tongue slightly, and swallow milk slowly and in small quantities. The sloughy patch was painted with a solution of nitrate of silver (five grains to the ounce), and the patient ordered to wash his mouth with "sanitas," mixed with equal quantities of water. He was given a pint each of milk and beef-tea during the day, and four ounces of port wine. The temperature rose at night to 102°.

22nd.—Temperature 99·4°. Tongue nearly of natural size; swallowing and speaking easy. The slough is separating. During the day the patient developed a cough, with expectoration slightly tinged with blood; and the temperature at night was 103·2°.

23rd.—Temperature 101°. There is a patch of localised pneumonia at left apex; sputa more rusty-coloured, but only small in amount. Linseed poultices were applied to the chest, and the steam kettle continued. Temperature at 8.30 P.M. 100°.

24th.—Temperature 98·4°. Still some cough and slight expectoration. The tongue is now of normal size and perfectly movable; the patient eats, swallows, and speaks with ease, and breathes in a natural manner. The slough has separated from under the frænum, and the ulcer is healing. On the right side of the tongue there is an ulcer a quarter of an inch deep, evidently the result of the bite.

27th.—Tongue still healthy; the ulcer at the side almost healed. Expectoration smaller in amount; contains very little blood. Temperature has been normal for the last two days. The patient has gained much in strength, and now takes some solid food.

From this date convalescence continued without interruption. The carious molar tooth was extracted a few days afterwards; the pneumonia cleared up in the usual way, and the patient left the hospital well on May 10th.

Medical Societies.

OBSTETRICAL SOCIETY OF LONDON.

Adjourned Debate on Electrolysis in Gynæcological Practice.

A MEETING of the above Society was held on Thursday, June 21st, Dr. John Williams, President, in the chair.

The debate on the papers on Electrolysis in the Treatment of Diseases of Women, read at the last ordinary meeting by Drs. Steavenson, Lovell Drage, Gibbons, and Shaw, was resumed.

Dr. PLAYFAIR declared that those who had really mastered the technical details of electrolysis had never found that method useless. It must be justly tried, and then established or condemned as results may prove. Dr. Playfair, through personal experience, had sufficient evidence to satisfy himself that the agent had great power, but that much was yet to be learnt. Cases should be treated by gynæcologists, and not left to professional electricians and to managers of the electrical department of hospitals. Passing sounds and electrodes required special knowledge of the diseases of women, and the electrician might not necessarily possess that knowledge. Turning to his own clinical experience, Dr. Playfair believed in the hæmostatic effect of the positive pole in the treatment of fibroids and other forms of uterine hæmorrhage. It sometimes acted most powerfully, and, as far as he could ascertain, permanently, in arresting hæmorrhage. In other cases it did good for a time; in only one case had he found it worthless. As to the treatment of non-hæmorrhagic fibroids by puncture and the negative current, he had only experience through two cases. He believed this variety of treatment to be the most questionable and dangerous manner of applying electricity; besides, very few such fibroids required any kind of treatment. In both of Dr. Playfair's cases a large mass was impacted in the pelvis, causing severe pressure-symptoms. In the first the tumour had practically disappeared, but there was great constitutional disturbance. In the second, where the pressure had rendered voluntary micturition impossible for a long time, the tumour was much lessened, the patient no longer required the catheter, and felt quite well and comfortable. Dr. Playfair then described some cases which tended to prove that the negative current was of great value in the treatment of severe dysmenorrhœa, membranous dysmenorrhœa, and aggravated uterine catarrh. Dr. Playfair, in conclusion, declared that his clinical experience proved that electrolysis was an agent occasionally capable of doing much good. It might do much harm if injudiciously and unskilfully used, but that truth furnished no argument for rejecting electrolysis as a therapeutic agent, but rather demonstrated that the effects of the new method must be carefully studied, its indications noted, and its dangers detected and avoided.

Dr. INGLIS PARSONS said that in the case of uterine fibroids the results of electrolysis would vary according to the position and structure of the tumour. He had found by experiment that electrolysis occurred only at the poles, and the free acids and alkalies resulting from it also acted locally. When fibrous tissue predominated, very little reduction in size was possible, even by puncture; whereas a soft myoma could be disintegrated by puncture. In one case he passed a small platinum needle, insulated to within a quarter of an inch from the end, through the anterior vaginal wall, and one inch into the substance of the tumour. The current only came off in the tumour, the vaginal wall remained intact; no sinus was left, as would have been the case had the actual cautery been used, but the puncture closed up at once, whilst at each sitting a large piece of the tumour was destroyed. By February last the tumour was reduced to one-third its original size, and had since remained unaltered. What was left appeared to be fibrous tissue.

Dr. BANTOCK could not express himself in favour of electrolysis. There had been much assertion as to what this treatment was going to do, but little evidence of what it had done. He did not believe that there was a tittle of evidence in support of the idea of electrolytic action extending between the poles. Apostoli himself and some of his followers had acknowledged the correctness of this opinion. Through the failure of the supposed electrolytic method they had taken to the totally different practice of thrusting one of the electrodes into the substance of the tumour. This resembled Dr. Greenhalgh's way of treating fibroids, by thrusting the actual cautery into their substance—a practice which had fallen into well-merited neglect on account of unfavourable results. Both methods sought to bring about the destruction of the integrity of the tumour, it being supposed that if once the degenerative process were started it continued till the fibroid tumour entirely disappeared, leaving, contrary to Dr. Parsons' statement, not a trace behind. The caustic action at the poles Dr. Bantock admitted, but he thought that this method offered no advantages over other practices in the treatment of those granulations on which uterine hæmorrhage so often depended. The alleged diminution in the size of the tumour was due rather to a change in the contion of the uterus itself. Dr. Bantock opposed the manner in which this system of treatment of electricity had become a fashion of the day, only too apt to degenerate into

quackery. Dr. Bantock concluded by saying that his mind was still open to conviction, and he was content to allow others to pursue the electrical treatment provided it was done in a truly scientific spirit, free from that empiricism and imposture which at present characterised it.

Dr. ROUTH compared the opposition to the electric treatment of women's diseases to the similar opposition to the sound and to ovariotomy in past days. Only those who had some experience of the method could judge of its merits. He believed that it was efficient in many cases. Thus the negative pole caused dilatation of the contracted passages, as in stenosis of the uterine canal; the extent of its dilating power in this respect had not been sufficiently dwelt upon. In one extreme case he could introduce two or three fingers into the uterine cavity after employing electricity. Hoping to dilate the cavity further, he gave ergot, when to his surprise he found it closed. Errors of diagnosis had discredited electricity, as in one case of a tumour impacted in the pelvis. Dr. Bantock had exhibited elsewhere a uterus removed for fibroid disease. In its cavity were found a number of small tumours. The case recovered, but had the uterus been first dilated, and the tumours removed one by one, the patient would have retained her sexual organs. In 1872 Dr. Routh cured two cases of large fibroid tumour by the electrical cautery, but the wounds made by the electrical agents then in use proved very troublesome to heal. This disadvantage was overcome by Dr. Apostoli's appliances. Dr. Routh stated that clinical experience showed the necessity of antiseptic injections after the application of electricity to fibroids, especially when rise of temperature occurred. The electric wire allowed the operator to limit the application of his remedy, both as to place and time, with great exactness. This was a great advantage, especially in fundal endometritis accompanied with discharge of tenacious mucus or pus. An ordinary caustic could not be applied with the same precision. Lastly, though hysterectomy was often justifiable, we must not forget that it unsexed a woman—a serious effect indeed; so that if electricity could also cure a fibroid, it would be far preferable to a mutilating operation.

Dr. CHAMPNEYS considered that discussion on the subject, especially as to permanency of success, was premature. Those who disbelieved in the method were not necessarily either ignorant, prejudiced, or even inexperienced; those who did not publish their successes might be perfectly capable of forming a judgment. He had given the method a trial, but did not consider that the time had arrived for the publication of his results.

Dr. GALABIN wished to know if electrolysis, and consequent absorption, of the cells of the tissues or tumour took place midway between the positive and negative poles, or only at the poles. He criticised the former opinion very strongly on physical grounds, and was inclined to believe that the effects of electric treatment in cases of fibroid were due to caustic action. Dr. Galabin regretted that so little satisfactory evidence on the treatment of fibroids had been brought forward. As a caustic, electricity was valuable when the interior of the uterus required treatment and the cervix was narrow; in other respects it was hardly superior to other caustic agents.

The PRESIDENT did not object to Dr. Playfair's claim that electricity should be placed on its trial. It had been already tried in the treatment of women's diseases for some time. The literature of the subject was not inconsiderable, but it was very disappointing, for it mainly consisted in the description of instruments and the mode of using them. Dr. Apostoli, in particular, had published little else, except a series of general assertions and sweeping statements. Now, in estimating the value of the published work of an author not personally known to the reader, and whose powers of observation could not be tested personally, the reader should be acquainted with more than one of that author's published writings. He should know the author's record, for one work might throw much light upon the value of another. In 1881 Dr. Apostoli read before the International Medical Congress a paper wherein he proposed to treat the uterus during the lying-in period by faradisation, with a view to prevent subinvolution, metritis, and other evils. Every Fellow of the Society might form his own estimate of that proposal. In a later work by Dr. Apostoli on "Chronic Metritis and its Treatment by Electricity" there was much about instruments and many sweeping assertions, but not a single case in support of the latter. Dr. Steavenson's paper was not free from similar statements. He said that the contracted cervix could be dilated by electricity with results more permanent than after dilatation by other means. We had, however, no data which made it possible to form any valid conclusion on the permanency of the effects of tents, bougies, &c. How, again, could Dr. Steavenson justify his assertion that electricity cured the stenosis of the cervical canal caused by amputation of the cervix by the galvano-cautery? The President severely criticised the statements of Dr. Carlet, a pupil of Dr. Apostoli, in a work on the treatment of fibroids by electricity after the method of his master. Dr. Carlet declared that small interstitial fibroid tumours were often regarded as chronic metritis, engorgement of the uterus, ulceration of the neck, anteflexion, anteversion, and especially retroflexion and retroversion. Such was the dominant idea in Dr. Carlet's work, as revealed by the ninety-four cases which he described. Fifty-nine were treated by positive galvano-caustic. In four cases only did the canal of the uterus measure over four inches, the greatest length being five inches and a half. In twenty-five it measured less than three inches! Together with the slight elongation of the canal there was enlargement and induration of the uterus, with hæmorrhage. The President was not ashamed of the ignorance which regarded these cases, with two or three exceptions, as cases of subinvolution or chronic metritis. These cases were treated for hæmorrhage for periods varying from two months to a year; yet in none did the diminution in the length of the canal exceed 1·5 centimetre. They could have been effectively treated in a shorter time by other means. The President then showed that the evidence in respect to twenty-one out of the ninety-four cases treated by negative galvano-caustic was equally unsatisfactory. Five cases were treated by puncture, mostly large fibroids, but in only one could Dr. Apostoli introduce the sound. The canal measured fifteen centimetres before and eleven and a half after treatment. This was a diminution of three and a half centimetres, a little less than an inch and a half, a decrease known to occur as a part of the cyclical changes of fibroids. Inconclusive, in a similar manner, was the record of nine cases treated by positive and negative galvano-caustic. In none out of all these cases did any alteration in size take place which might not be prevented by fibroids when not treated at all. The method had thus been put to the test by its founder, and with very unsatisfactory results. There might be a place for the employment of electricity in the treatment of diseases of women, but as yet no case had been made out for it.

Dr. STEAVENSON felt some difficulty in replying to all the questions included in the discussion. He hoped that it would be remembered that he wrote his paper more than a year ago; the method had since undergone modifications. He had not admitted that the electrolytic action of electricity was limited to its cauterising properties, but advocated a more extensive use of electrolysis in those diseases of women where caustics were most usually employed. The apparatus was cumbersome and its management difficult, so that the new method was not likely to supplant others; but to those who could manage the apparatus, electrolysis would prove, as Dr. Horrocks had said elsewhere, a more efficient and elegant way of applying caustic than any other that we possessed. In reply to Dr. Bantock, he maintained that this caustic action was true electrolytic action. Electrolysis certainly took place at the poles, and, though this important point was not settled, Dr. Steavenson believed that it also went on in the tissue between the poles—as, for example, in the substance of a tumour. Turning to the treatment of erosions and catarrh, he brought forward evidence to prove that electrolysis, instead of being a longer, was usually a shorter method of cure than any other; for it was a better local remedy than any caustic. Some of his cases certainly required three or four months' treatment by electrolysis, but they had mostly undergone, without benefit, prolonged application of mineral caustics, in some instances for one or two years. Turning to Dr. Playfair's remarks, Dr. Steavenson said that gynæcologists should not attempt this treatment without some knowledge of electricity, nor electricians without some knowledge of gynæcology. In reply to the President, he thought it premature to say that the enlargement of the cervical canal for dysmenorrhœa produced by electrolysis was more permanent than when it was effected by mechanical dilatation, or by incisions; but the President admitted that some contraction occurred at once after the canal had been stretched to a large size by dilatation. Dr. Steavenson declared that

the case was different after electrolysis; there was no immediate contraction, and certainly none for a month or six weeks. But for how long the enlargement of the canal was maintained he had not sufficient experience to prove. As to the taunt that if cicatrical tissue out of sight in the pelvic cavity could be made to disappear by electrolysis cicatricial tissue on the surface of the body might be, and ought to be, removed by the same method, though the advocates of electrolysis shirked that test, Dr. Steavenson said that, on the contrary, he had tried electrolysis with success on cicatrices at the meatus of the urethra and on the brawny tissue around old perineal and scrotal fistulæ. The dense tissue visibly softened down.

Dr. GIBBONS admitted that some of his cases might have been cured by other means, but maintained that the results seemed more satisfactory; and where he could trace the history the patients seemed more thoroughly cured by electrolysis than by other methods. The caruncle case criticised by Dr. Herman required two applications, for a special reason which he explained. He further admitted that the method was very unsuitable for private and general practice; yet with all its present disadvantages it was a means of treatment well worthy of prolonged trial by those who have patience and material at their disposal.

Dr. SHAW believed that an increase of arterial tension really took place and continued after the application of the current, and had no doubt that what was understood by electrolysis really took place; for at the positive and negative poles, together with acids and alkaline bases respectively, there were acid and alkali albumens. Some of the cases of failure were due to local irritation, the result of a too early or too vigorous use of the hæmostatic action of the positive pole. A preliminary or occasional resort to the derivative action of the negative pole appeared advisable. The negative pole acted, he believed, in a twofold manner on a stricture or a closed cervix. Firstly, it caused the swelling up of capillary granulations; secondly, it exercised a directly solvent action on the fibrous tissue. Dr. Shaw had satisfied himself by a series of experiments, a description of which were appended to his paper, that electrolysis went on between as well as at the poles.

EPIDEMIOLOGICAL SOCIETY OF LONDON.

Relationship of Diphtheria to Throat Illness.

A MEETING of this Society was held on June 13th, Dr. Thorne Thorne, President, in the chair.

Dr. ARTHUR DOWNES read a paper entitled "Diphtheria and its attendant Throat Illness," of which the following is an abstract. The author, after pointing out that the incidence of diphtheria on the great towns had markedly increased since 1881, proceeded to consider the relationship of this disease to "croup" and to the minor throat illness which so constantly attends it. Examples from his official experience were given in illustration of the danger to the public health which the present nosological chaos entails. He contended that the throat illness associated with epidemic diphtheria, using the word in its narrowest sense, was absolutely *ejusdem generis*. Referring to theories of development of diphtheria from simple sore-throat by a process of evolution, he observed that *a priori* the general laws of evolution appeared to be opposed to such a development under the given conditions; that none of the supposed transformations of harmless organisms into pathogenic had stood the tests of time and criticism; and, finally, that in Dr. Burdon Sanderson's well-known experiments on infective inflammations, there was nothing to show that the results were not simply due to the survival of a particular pathogenic organism over all others in successive cultivations. Epidemics of diphtheria in rural districts were of two kinds—"smouldering" and "explosive." In the former unrecognised cases generally bridged the gaps between the severe outbreaks. The explosive type of outbreak seemed often to be occasioned by increased infectiousness of some particular case. The virulence and spreading power of an epidemic, however, though usually associated, were not necessarily concomitant. The usual mode of spread of diphtheria by ordinary personal infection and occasionally by fomites was illustrated by examples. Milk epidemics were unknown in those rural districts where little milk is consumed and no evidence exists of water-spread diphtheria. Dr. Downes related a remarkable example of outbreaks of membranous sore-throat extending over a period of five years, and ceasing suddenly and entirely on remedying a definite soil-pipe defect; but as the outbreaks never spread beyond the one house, and the cases were not followed by any typical sequelæ, he considered their relationship to true diphtheria unproven.—In the discussion which followed, the President, and Drs. Buchanan, Michael Taylor, and Jacob took part.

Dr. CORY read a paper on the Condition as to Vaccination of one hundred and fifty persons scarred by Small-pox, which has already been commented upon in a previous number of the journal.—In the discussion which followed Drs. Buchanan and Lloyd and Mr. Collins took part.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

Suprapubic Lithotomy.

A MEETING of the Surgical Section of the Academy was held on April 13th.

Mr. KENDAL FRANKS read a paper on Suprapubic Lithotomy and Vesical Suture, and referred to the case of a man, aged sixty-five, who had suffered from stone in the bladder for two years. He was a tall, large, heavy man, with a deep perineum and a large prostate, and on account of these conditions the suprapubic operation was performed on May 10th, 1887, the rectum and bladder having been both distended. The distance of the pre-vesical fold of peritoneum from the pubis was three inches. Three uric-acid stones were extracted of nearly equal size, shape, and weight, without any facets, and weighing in all 666 grains. The bladder was sutured—firstly, by Lembert's method, with catgut, and a second row of sutures (continuous) were inserted so as to completely cover in the first row. The external wound was drained from the pre-vesical space to the upper angle of the wound, and the bladder was drained with a soft rubber catheter, passed per urethram, which was kept *in situ* for five days. The bladder wound healed by first intention, and at no time was there any leakage of urine through the wound. The patient passed urine without the aid of a catheter on the twelfth day and subsequently. The drainage tube was retained in the wound until the tenth day, and Mr. Franks explained that this was done to prevent any mischief being done should the bladder sutures not hold. He recommended that the drainage tube should always be retained in the external wound for at least seven days, as statistics showed that the vesical suture might yield as late as the sixth day. The patient was out of bed and walking about the wards on the fourteenth day. Mr. Franks said that the causes of failure in suturing of the bladder in the high operation were: (1) An anatomical one, that the external coat of the bladder in this region was fibrous and not serous; (2) a thinned and diseased condition of the bladder walls; (3) injury to the edges of the wound by the manipulations employed to extract the stone; (4) a putrid condition of the urine. The advantages of suture were a shortened convalescence, ten days being on an average gained, and an effectual preventive against urinary infiltration. Mr. Franks considered the operation would gain in favour, and would be adopted for other than large stones, on account of its ease of performance, its freedom from hæmorrhage, and the greater security it afforded for thoroughly clearing out the bladder.

Mr. F. ALCOCK NIXON read a paper on Suprapubic Lithotomy in a gentleman, eighty-one years of age, who had fifty-seven years ago suffered from "bleeding from the bladder and a stoppage of water"; the bleeding recurred at intervals every five or six years for fifty years. The bladder was opened above the pubes and two calculi were removed, one weighing 2 oz. 30½ gr., the other 159½ gr. They were composed of the ammoniaco-magnesian and calcium phosphates. The bladder was sutured and drained, the tube being placed in the abdominal wound and a catheter retained in the bladder. The temperature, which was 101°F., became normal on the evening of the third day; the urine became acid; the patient was quite free from pain, able to take food well, and enjoy long periods of sleep. On the fifth day the patient died suddenly from syncope, from which he had previously suffered on several occasions. After death, the wound in the bladder was found to be healed, except about half an inch in the centre, from which urine had escaped

through the abdominal wound for a short time on the second day, while the catheter was plugged by a blood clot. There was no trace whatever either of peritonitis or of cellulitis.

In the unavoidable absence of Dr. Heuston, a paper on Vesical Tumour removed by Suprapubic Cystotomy was read by Dr. ALFRED SCOTT. The patient, aged forty-eight years, suffered for four years from symptoms of vesical irritation, accompanied at gradually increasing intervals by hæmorrhage of an arterial character, which for the later five months came freely at each period of micturition in a considerable quantity. On his admission to hospital a tumour was diagnosed by sounding, and a roughened condition of the bladder throughout was noticed. The presence of the larger tumour was also demonstrated by rectal examination. The bladder being now washed out, a portion of the tumour came away, which was proved by Dr. Alfred Scott to be papillomatous in its nature. On March 15th, 1888, the bladder was opened by the usual suprapubic method, and a tumour somewhat larger than an orange, composed of three lobules, attached to the right wall of the bladder by narrow pedicles, was removed, as were also a number of smaller growths about the size of hazel-nuts. The hæmorrhage, which was very copious, was at once controlled by a solution of tannic and gallic acids, subsequently to which the bladder was illuminated by the electric light, and then a stream of a weak solution of hazeline was passed into the bladder until it returned clear. The bladder was then closed, except sufficiently to allow of the introduction of a drainage tube, care being taken to close the areolar spaces in connexion with the bladder wound. Subsequently to operation the patient progressed favourably for twelve days, the urine becoming normal in its characters; but then the temperature suddenly rose to 104·2° F., the patient became delirious, and, although the temperature was subdued by quinine within twenty-four hours, the patient gradually sank and died sixteen days after operation. Dr. Bewley, pathologist to the Adelaide Hospital, performed a post-mortem examination, and found that there was no peritonitis, the bladder being firmly united to the abdominal parietes at the seat of the wound, which was healthy. The bladder was contracted; anterior wall normal, posterior wall thickened and cutting hard. In the centre of this surface, a space about the size of half-a-crown was covered with white flocculi of seemingly gangrenous tissue; this was the seat of the removed papilloma. Spleen and kidneys healthy, there being no evidence of septic infection.—Mr. W. THORNLEY STOKER said that Mr. Franks had not referred to what was attracting a good deal of discussion in connexion with suprapubic lithotomy—namely, the class of cases in which that operation should be selected. As far as any rule had yet been established on the subject, it was this: that suprapubic lithotomy was to be performed in the adult in cases where the stone was too large to admit of its probable successful removal by perineal operation—i.e., where the stone exceeded two ounces in weight, or where, because of its hardness or the great size of the prostate, there was not a likelihood that lithotomy would be successful. In Fellisen's drawings, to which Mr. Franks referred, and which Sir William Mac Cormac adopted in his paper, the extreme distance obtained by hyper-distending the bladder was between two and three centimetres. Another remarkable difference between his specimen and Fellisen's was that under hyper-distension the latter assumed a globular form, whereas his was more of a pyriform shape, as taught in the schools.—Mr. TOBIN suggested, with reference to the different expedients of obtaining room to make an incision, holding the patient's legs aloft. He had tried the experiment on a subject in the post-mortem room. Having half filled the bladder, he measured the amount of space uncovered by the peritoneum while the subject was lying flat on the table. He then raised the subject, holding the legs aloft, and on measuring again he found he had double the space with the subject in the raised position than he had when prone.—Mr. J. H. SCOTT mentioned a case of a gentleman, aged sixty, who had been under his care for urinary irritation, from which he suffered for several years. He discovered a very large stone. The urine was fairly healthy. He thought the best chance was afforded by the suprapubic operation, which he accordingly performed. There was great difficulty in suturing the bladder. For three or four days the case went well; but then diarrhœa set in, and on the ninth day the patient died. At the time he feared the distension of the rectum might have caused the irritation which produced the diarrhœa, but he did not think so now, having ascertained that the patient had contracted a form of dysentery on the Ganges.—Mr. M'ARDLE said that with Mr. Stoker's views on the selection of cases he fully agreed, while he emphasised the necessity of accurate records of suprapubic lithotomy, especially the fatal cases. If such records were to be of statistical value, the conditions prior to, during, and after operation must be detailed to enable operative surgeons to determine the real dangers of the operation *per se*.—Deputy Surgeon-General JOYNT did not think that a case had been made out for suprapubic lithotomy to displace the lateral operation, with which he had been familiar in India, where he had operated in not less than one hundred cases. Out of that number he could only recollect one fatal case, and whether that was due to the operation or not he could not now say. He could understand, however, that the suprapubic operation would be an acceptable one in women, there being a good deal of trouble in operating on them. He had had cases in which he removed stones an inch and a half in circumference from young girls by dilatation of the urethra, aided by incision.

Reviews and Notices of Books.

Clinical Lectures on Important Symptoms: On Albuminuria. By T. GRAINGER STEWART, M.D. Edin. Pp. 250. Edinburgh: Bell and Bradfute. 1888.

THIS is not only one of the most important of recent contributions upon the subject of albuminuria, but from its clinical character it is also entertaining and easy reading. The author has retained the original form and expression of the lectures to a very large extent. The quaint old-time style of printing the term "Gentlemen" at the commencement of each lecture serves to lend an air of professorial dignity and authority, and almost seems to imply that those to whom the lectures are addressed must receive the information in the unquestioning spirit due to the lecturer. It is but fair to add that, as a rule, Professor Grainger Stewart has taken considerable pains to verify his conclusions and to justify his theories. The second edition of his book upon "Bright's Diseases of the Kidneys" has been out of print for many years, and apparently a third edition of that work is not to be expected, since he has sought to embody in these lectures his present views concerning the chief clinical questions formerly discussed.

The first of the fifteen lectures composing this volume deals with the forms of albumen met with in the urine, and their qualitative and quantitative tests. The forms of albumen are enumerated in a concise manner, with a few apposite remarks upon each variety, and they are followed by a very valuable table showing the reactions for the chief forms of albumen with each of the dozen or more tests which are occasionally employed. Some space is devoted to a defence of the picric acid test, which has been so frequently assailed. The possibility of erroneous conclusions resulting from the presence of mucin is discussed, with the conclusion that a little practice only is needed to obviate all likelihood of error. Upon the whole, the author is inclined to regard this as the "most reliable and delicate test" which we at present possess. In a table on a subsequent page he shows that this delicacy extends to the recognition of the presence of 0·000655 of a grain of serum albumen per ounce. The incidence of albuminuria among the presumably healthy forms the subject of the second lecture; and as this is still, to a large extent, a debateable question, the author's experience and conclusions are of considerable interest. Posner's statement of the possibility of demonstrating albumen in *every* case, provided that sufficiently delicate methods are employed, is explained and put aside with extreme gentleness and modesty. Still, we cannot but feel that Professor

Grainger Stewart must have been somewhat unfortunate in the selection of the 505 individuals from whom he learnt that albumen was present in 32·8 per cent. Before startling us with the statement that albumen can be found in nearly one in three of the male population, if the urine be examined "during the active period of the forenoon, an hour or two after breakfast," it might perhaps have been well to consider whether among the 205 soldiers and recruits and the 100 men about or over sixty, there might not have existed numerous sources of fallacy. The 100 healthy male adults engaged in civil employments only gave a percentage of 10 showing albuminuria. Perhaps the safest course is to admit the accuracy of Professor Grainger Stewart's numbers, and to regard them as probably arising from local conditions of climate, habits, or occupation. From a southern point of view the percentage appears excessive. The author's results of the influence of diet, muscular exercise, severe exertion, blowing wind instruments, cold bathing, and mental excitement are drawn from such small numbers that they could hardly stand alone. As a whole, however, they agree with the investigations of previous observers.

The various theories of the precise mechanism of the production of albuminuria are dealt with in an extremely lucid manner in the fourth lecture. The transudation of albumen from the Malpighian tufts is regarded as proved for most cases, and the suggestions of an altered character of the blood, an altered state of the filtering apparatus, an abnormal vascular tension, or some changes in epithelial cells and stroma, are each in turn carefully examined. While many will demur at Professor Grainger Stewart's conclusions, and occasionally at his somewhat sweeping method of brushing aside objections, yet there is obviously much to be said in support of his views. "I would have you believe that albuminuria is very often due to changes of an inflammatory character in the epithelium of the tubules and in the stroma of the organ, and that in a very large proportion of the cases in which it occurs in practice it is dependent upon this cause; that increased blood pressure is a factor of some importance; that increased permeability of the filtering apparatus induces it in many instances; and that there may be some conditions of the blood which account for it or favour its occurrence." This *résumé* is of an all-embracing type, allowing room for each observer to hold his own opinion, and leaving disputants merely to argue upon the *most* common cause, instead of *the* cause. The struggle is thus simply one for pre-eminence, admitting that, under certain conditions, all theories may be right.

In the next lecture, the author does not maintain this charitable frame of mind, nor does his pathology remain so free from objection. He narrates cases of chronic albuminuria (one lasting for more than thirty years), and he considers that during the whole time chronic *inflammatory* action continued. Clearly he would appear here to employ the term *inflammatory* in a sense which is not usually recognised. The same objection might be urged against his view of the causation of albuminuria in cirrhosis of the kidney. In the seventh lecture the author once more attempts the difficult task of harmonising the apparently opposing views of various observers. The cardiac hypertrophy associated with chronic renal changes is "to be referred partly to the obstruction of the renal circulation inevitable in the disease, partly, no doubt, to the widespread disease of arteries, arterioles, and capillaries, partly to the greater difficulty experienced by the heart in its efforts to drive an impure blood through the vascular system, perhaps in part also to the spasmodic contraction of the small vessels as suggested by Dr. George Johnson." Again, in speaking of the vascular changes, and admitting that his own observations confirm those of Dr. George Johnson regarding the hypertrophy of the middle coat of the smaller arteries, the author considers that "alterations of the inner and outer coats are common, and that the thickening and tortuosity of arteries are often due to them." And yet he holds that "arterio-capillary fibrosis often exists without any renal cirrhosis." The lecture upon uræmic symptoms occurring in the course of advanced kidney disease is extremely interesting and instructive, the notes of several cases lending to it an air of downright earnestness which fixes the attention. Here again, unhappily, the lecture, to our thinking, is marred by a lack of precision. In dealing with the explanation of uræmic symptoms, the author, with characteristic Scotch caution, hesitates to pin his faith to any single theory, but allows that uræmia may result from the direct poisonous action upon the nerve centres, or from cerebral anæmia, the consequence of vascular spasm, or of serous effusion within the cranium, or from organic degeneration, minute hæmorrhages or softening processes occurring in the substance of the brain. On the other hand, as a practical hint, for which many will be thankful, he states that in cases of cerebral hæmorrhage in which "the condition seems almost hopeless, I am comforted rather than otherwise if I find that it is complicating a renal lesion." The lecture dealing with albuminuria resulting from fever, diseases of the circulatory, alimentary, or nervous systems, and with albuminuria complicating glycosuria, is necessarily incomplete in the present state of our knowledge. The facts are stated calmly and with judicial caution, and explanatory hypotheses are set forth with full consciousness of their limitations. We cannot, however, refrain from noting the masterly deductions drawn from the action of digitalis in cases of cardiac albuminuria.

Perhaps the lecture to which most observers will turn with the greatest interest is that upon forms of albuminuria of a cyclical or intermittent type. A brief summary of recent contributions is first given, and the author then describes with illustrative cases (1) paroxysmal albuminuria, (2) dietetic albuminuria, (3) albuminuria from muscular exertion, and (4) a form of *simple* persistent albuminuria, this last being characterised by a normal elimination of urea, by the absence of tube casts and of any obvious cause for the appearance of albumen. He considers it probable that the first form may have a slight tendency to culminate in organic renal disease, but that this result is less likely to follow the second and third categories. In the fourth class he thinks the prognosis is less hopeful, but is to be guided by observation of the occurrence of any subsequent interference with eliminative work, together with any sign of later vascular changes. The differential diagnosis and the prognosis in albuminuria follow the lines naturally indicated by the preceding lectures, and do not call for any special remark here. Those who disagree with the author concerning the occurrence of paroxysmal and dietetic albuminuria, will certainly not be prepared to believe that the prognosis can be good in any form of albuminuria. The whole question is one which is hardly yet ripe for definite statement.

The concluding lectures upon diet in albuminuria, and upon the effect of medicines, are relatively brief though essentially practical. They form a very satisfying ending to this work.

Professor Grainger Stewart has produced a book which will be eagerly consulted by all who are interested to learn his present views. He has evidently studied the recent literature with considerable critical care. He has submitted every statement and every theory to rigorous examination, and has instituted numerous fresh researches to confirm or refute opinions currently held. Every page is characterised by laborious sifting of a vast amount of material, sometimes chemical, sometimes clinical, sometimes theoretical,

but always stated with such fluent ease that the labour is likely to be overlooked.

The book is provided with a good index, and with a very serviceable list of books and papers referred to in the lectures. In a future edition the misprint upon p. 223, line 20, should be corrected.

The Electric Illumination of the Bladder and Urethra as a means of Diagnosis of Obscure Vesico-Urethral Diseases. By E. HURRY FENWICK, F.R.C.S., Surgeon (Outpatient) to St. Peter's Hospital, Assistant-Surgeon to the London Hospital, &c. London: J. & A. Churchill. 1888.

DURING the last twelve months the subject of the electric illumination of the bladder and urethra has been somewhat prominently before the profession, and we have been able to publish in our pages more than one record of the valuable results of this mode of investigating obscure diseases of the bladder. The old endoscope, illuminated by an oil lamp only, was of such limited use that very few surgeons ever employed it at all; and the earlier electric endoscopes, in which a platinum loop was used with a current of cold water flowing through the instrument to keep it cool, was too cumbrous and expensive to be at all widely resorted to. With the introduction of the incandescent electric lamps of Swan and Edison, and their adaptation to the cystoscope and urethroscope, a new era opened. The instrument was simplified and cheapened. The current of water is dispensed with, and the space in the instrument formerly occupied by the water tubes is now utilised for the passage of rays of light. Even now, in its most modern and its simplest form, it is an elaborate instrument which is not likely to become so widely and generally used as the ophthalmoscope and laryngoscope. Like these instruments, its use requires practice and some skill, while there is far greater need for care, as it is by no means difficult to inflict serious injury on the bladder if the tiny lamp is allowed to remain too long in contact with its surface. When we remember how completely the ophthalmoscope and the laryngoscope have revolutionised the practice of ophthalmic and laryngeal surgery, it is impossible not to hope that a like result may accrue from the ability to *see* the interior of the bladder and urethra. Up to the present time this mode of examination has been of most service in the detection of vesical growths, especially when small or scattered. But it has also given help in the detection of foreign bodies, stone and some other conditions of the bladder. We cannot, however, yet assign a limit to its usefulness. The whole subject is still in its experimental stage, and we most gladly welcome any additions to our ability to deal successfully with the early stages of vesical growths, or with those obscure conditions not certainly recognisable by other senses than by sight. Mr. Fenwick's work gives a short account of the gradual evolution of the present instruments, of their mode of use, and of the results obtained by them so far as present experience goes. It is pleasantly written, and will, no doubt, have a large circle of readers.

IPSWICH AND EAST SUFFOLK HOSPITAL.—The governors held their anniversary meeting at the Town Hall last week. The report showed a falling off in the annual subscriptions and in the Sunday and Saturday collections. To meet the deficit of last year, with the sanction of the governors, the committee had appropriated £665 for that purpose instead of investing capital and legacies. But there was this year a debit balance of £347 0*s.* 4*d.* Two important alterations had been made affecting the medical supervision of the hospital—namely, the abolition of the distinction between physicians and surgeons, and the addition of an assistant house surgeon to the officers of the institution.

THE CASE OF THE EMPEROR FREDERICK.

IN the *Berliner Klinische Wochenschrift* of July 2nd, the editor, Dr. Ewald, writes as follows:—"We have not thought it desirable, either during the lifetime or by the open grave of the Emperor Frederick III., to discuss from a medical standpoint the symptoms, history, and treatment of his malady, and to comment upon it from the critical and prognostic aspect, because it seems to be impossible even now, as at an earlier period, to satisfactorily detach this deeply-deplored case from political and personal considerations, nor to judge it objectively, without having the fullest knowledge of all that has been played both upon and behind the stage of this tragic episode in our history. We have confined ourselves to publishing authentic accounts furnished to us by the physicians engaged in the case, and we ought, for our satisfaction, to state that the German medical journals, apart from some brief remarks, have all viewed it in the same light, leaving the arena of contests about diagnosis and treatment to the more or less inspired pens of the political press, because they, like ourselves, were not willing to accept at secondhand from the English papers, and without any proof of its accuracy, their information as to the condition of the German Crown Prince and later Emperor during the greater part of his illness. We have previously expressed our regret that we have been so long deprived of bulletins from the German doctors, and consequently of an accurate (*massgebenden Bilde*) picture of the course of the disease. It was thought by this means to entirely dam up the broad stream of publicity; but, on the contrary, it has by this very attempt been made to flow in a much greater and uncontrollable volume. We do not take up the position of those who from the commencement were not satisfied with the English physician merely because he is not a German. Science, and especially so supremely humane and cosmopolitan a science and art as medicine, stands above nations, and for us it remains *sub judice* whether, in the case of the head of the State, the only thing that remains to a deeply suffering patient—personal trust and hope in his doctor (and the Emperor Frederick repeatedly expressed this confidence)—should be dependent upon national motives. But this hope—which we will admit to have been given *bonâ fide* to the illustrious patient, and maintained as long as possible (since we do not feel called upon to play the part of a State lawyer, and, through Sir M. Mackenzie, confront those who more or less worked in agreement with him for a long time)—has, in the course and issue of the malady, been sadly refuted, and the diagnosis declared from the beginning by the German physicians on the ground of clinical experience and observation is absolutely verified. While we once more state this fact before the whole world, and therewith demonstrate to superfluity the superiority of our authorities, we think that, for our part, we are neither called upon nor justified to make further retrospective observations; but we hold this to be the business of the German physicians concerned, in case they should at all find themselves called upon, or rather compelled, to do so. Although the German physicians, as was their sacred duty, did all in their power to give full weight to their convictions, and although a Vienna medical journal, without any exact knowledge of the circumstances, is so bold as to reproach the German doctors with a lack of courtesy towards colleagues ("*mangel an collegialität*"), and in so doing to cast reproach on the leading men of our University, whose scientific and social position stands, and must stand, high above personal jealousies and intrigues, yet it is well enough known that everything must of necessity be esteemed and judged under the *ægis* of *esprit de corps*. We may, both as to form and substance, place our claims on such omissions as low as possible; but this at least we are entitled to demand: that these injurious statements should not be circulated through the world on chance newspaper paragraphs without any knowledge of the motives on which they are based—statements which not only strike individuals, but through them the order of which they are eminent representatives."

Analytical Records.

PURE COMPRESSED MILK EXTRACT, PREPARED BY THE SWISS MILK COMPANY, ST. GALL.

(CARL LAWINSKI, 50, MARK-LANE, LONDON, E.C.)

A very interesting and valuable preparation. It is literally and truly a skim-milk powder, prepared without antiseptics, and easily soluble in hot or cold water. We obtained by analysis the following results:—

	Per cent.
Water	3·00
Ash	7·75
Fat	0·20
Casein and lactose	89·05
	100·00

The directions are that each tin, which contains about 150 grammes of powder, is to yield 1 litre of milk. So prepared, the milk contains more than 14 per cent. of milk solids other than fat. It is therefore a highly nutritious food, in spite of the absence of cream.

PURE COMPRESSED CREAM MILK.

This article comes from the same source as the last, and is evidently prepared by the same method. But in this case the milk has not been skimmed, and the powder when suitably diluted with water yields ordinary cow's milk of excellent quality. We found by analysis—

	Per cent.
Water	1·70
Ash	6·06
Fat	21·80
Casein and lactose	70·44
	100·00

After dilution according to the printed directions, this gives a milk containing in each 100 volumes, solids not fat 11·48, and fat 3·27 parts by weight. The preparation is an excellent and useful one, and will doubtless meet with an extensive sale.

MILK CHOCOLATE POWDER.

(SAME MAKERS.)

The idea of mixing the milk powder with cocoa was as sensible as simple. Two teaspoonfuls make a cup of excellent chocolate, which can be prepared in a minute.

BISCUITS AND BREAD FOR THE DIABETIC.

(E. BLATCHLEY, 167, OXFORD-STREET.)

The treatment of diabetes has been wonderfully aided during the last few years by new dietetic preparations, and we have from time to time to record fresh improvements. We have lately received from Mr. Blatchley, and have submitted to chemical examination, nearly a dozen kinds of biscuits and bread, all of which are palatable and valuable. Some of them are absolutely free from starch, while the others contain very little. Most are flavoured with almond, the others with cocoanut or chocolate, and six of them are sweetened with saccharin. Four of them gave no reaction at all with the iodine test, so that the physician has now a considerable choice before him.

WINES AND SPIRITS.

(POWNCEBY & CO., 183, OXFORD-STREET.)

The sample of port is a good example of the excellent wine that can be sold at a moderate price if matured in wood. It is tawny and dry, and, although light and easily assimilated, is generous. It is said to be over forty years old, but to have been from time to time "filled up"—Solera fashion—with its own wine. Our examination is entirely in accord with this statement. We have also examined samples of very old Scotch whisky and liqueur brandy, both good—the latter, indeed, extremely fine.

REAL TURTLE SOUP.—PURE ESSENCE OF BEEF.—PURE BEEF-TEA.

(THE VIKING FOOD AND ESSENCE COMPANY, LIMITED, HEARN-STREET, CURTAIN-ROAD, LONDON.)

These preparations seem to us as good as they could possibly be. They are contained in glass bottles, so that the slightest change could be perceived at once. They are entirely sterilised, and one sample which we have had for months is as good as another received the other day. They are delicate in flavour, and, it is needless to add, they are excellent and concentrated forms of animal food.

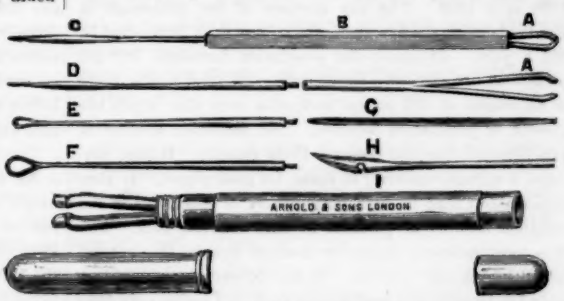
New Inventions.

POISON BOTTLES.

Two patterns have been submitted to our notice—Hermes' Patent Poison Bottle, and Holt's Patent Poison Bottle. Both have been devised with a view to checking the fatalities which occur so frequently by patients mistaking poisonous lotions, liniments, &c., for medicines for internal use. Hermes' bottle, an illustration of which is appended, has the appearance of an ordinary poison or dispensing bottle, but is entirely different from it in construction, as the usual mouth of the bottle is closed. This alone obviates pouring out the contents in the customary manner or mistaking it for an ordinary mixture bottle. The mouth is at the base of the bottle; therefore, before the contents can be poured out it must be reversed: this action, being so entirely novel, compels the most thoughtless or negligent to reflect as to its contents. The inventor is Mr. Hermes, 6, Fairleigh-road, Stoke Newington, N. The bottle patented by Mr. Holt, of 63, Faulkner-street, Manchester, is shaped like a coffin, this form being relied upon to draw attention to the death lurking in its contents. Both contrivances are well calculated to accomplish what is desired, and will doubtless come into general use, though of the two preference may perhaps be given to the production of Mr. Hermes.

A PORTABLE INSTRUMENT CASE.

WE have received from Messrs. Arnold and Sons, of West Smithfield, a portable combined silver caustic case and



receptacle for various instruments. This case can be easily carried in the waistcoat pocket, like the ordinary silver caustic case, whilst the receptacle contains the following useful instruments, all fitting a universal screw and small handle. Figs. A, B, and C show tweezers and exploring needle ready for use; the tweezers are useful for the removal of splinters or for epilation. The instrument B forms the handle for the following:—Exploring needle, C; sharp and blunt pointed probes, D and E; ear scoop, F; grooved director, G; suture needle with slot, H; and I, the case which contains them.

THE LANCET.

LONDON: SATURDAY, JULY 7, 1888.

AMONGST other valuable matter in the recently published volume of Minutes of the Medical Council is the Fourth Report of the Statistical Committee of the Council, which gives a Census of registered medical practitioners of England and Wales for the years 1881 and 1886 severally and comparatively. The various chapters of this Report, and the tables and charts accompanying them, will supply data for those who watch the development of the profession and compare its growth with that of the population of the country. It will afford material for judgment to those who contemplate entering the profession, and equally so to those who have already entered it, and are casting about for a place or a neighbourhood in which their services may be required. It is not always possible to decide the choice of a sphere of labour on mere statistical grounds; but they are an element in judgment, and will be found in abundance here. We have taken many opportunities of informing our readers that the medical profession is getting too numerous. The chief interest of the Report is to emphasise and demonstrate the same conclusion. Without going into minute details, we shall give a few illustrations. The object of the framers of the Report is togive the chief statistics as respects the medical practitioners of England and Wales in two years—1881 and 1886—the first and last of a quinquennial period. They show how many acres and how many persons on an average were assigned to each practitioner in the respective periods. Roughly, the result is that the profession grows faster than the population; that a medical man in England had fewer acres and fewer patients in 1886 than in 1881. In 1881 there were to each practitioner 2479 acres, in 1886 only 2199·6. In 1881 there were 1747 persons, possible patients, to each practitioner; in 1886 only 1662. The net increase of the profession in England during the five years was no less than 1908—that is, 381 a year. Of course the population increases, but the profession increases at a faster ratio. In other words, there is an excess of 826 in the profession over that which the growth of population requires. The increased number of practitioners does not disperse itself equally. It has, perhaps, a natural tendency to make for good places. It thus comes about that in such places there is theoretically the smallest number of patients to each medical man. The two most unhappy places for medical men in this respect are Brighton and London. In the former place there are only 726 persons to a practitioner, and in London only 939; whereas in Bristol there are 1232, in Liverpool 1564, in Wolverhampton 2062, and in Sheffield 2593. If medical happiness consists in the number of possible patients, Salford must be regarded as the paradise of the medical profession, for there are 3908 persons to a practitioner. But even here such happiness is not secured, for the number of the profession has increased from thirty in 1881 to fifty-five in 1886, and in the latter year there were only 64 per cent. of the possible patients of five years before. In a few districts there is an actual increase of population to each practitioner. In the South Midland District, comprising the extra-metropolitan portion of Middlesex, Hertfordshire, Buckinghamshire, Oxfordshire, Northamptonshire, Huntingdonshire, Bedfordshire, and Cambridgeshire, there were 1849 persons to each practitioner in 1886, as against 1841 in the former period. Similarly in the Eastern District, comprising Essex, Suffolk, and Norfolk; and in the North Midland District, comprising Leicestershire, Rutlandshire, Lincolnshire Nottinghamshire, and Derbyshire. The district in which the largest increase of persons to practitioners took place was the Northern, comprising Durham, Northumberland, Cumberland, and Westmoreland. The population in the five years increased by 153,030, and the profession only by 49. The report indicates three districts in which there is an excess, and a growing excess, of practitioners to population—viz., 1. London. 2. The South-Eastern Division of England. 3. The South-Western. In Table 1A the facts are set forth. From this it appears that in 1886 London contained no less than 1943 registered practitioners over and above its due share, an excess the more significant when the crowding of its population is considered.

We have only taken a few of the principal facts from this instructive and interesting Report, and we cannot much prolong our notice of it here. There are two valuable tables giving the proportion of persons to practitioners in, respectively, twenty-eight large towns, and in the counties of England and Wales. In towns the mean number of persons to a practitioner is 1284, and in counties 1936. The committee say that their lists show where practitioners are most needed, and where they are superabundant. This is too bare a way of stating the case, but the facts are collated with much clearness and interest. Other sections of the Report have reference to the sources of the qualifications of the registered practitioners of England and Wales in the two years, to foreign qualifications and their sources, and to the death-rate of the different districts and divisions of England; and Section 7 is meant to indicate the wealth of the different portions of the kingdom. We must leave these tempting mines of information for the present. It is somewhat pathetic to notice that there were on the Register of 1886 only seven practitioners who were in practice before 1815,—i.e., seventy-one years before. This remarkable kind of man must soon be a matter of history.

AN article of considerable interest appears in the *Edinburgh Medical Journal* for the present month, from the pen of Dr. FRANCIS TROUP, on the Diagnosis of Early Phthisis by the Microscope. The works of this author on the microscopical examination of the sputum in various forms of pulmonary disease have prepared the profession to expect further researches from so accurate and earnest an observer, and in this, his latest contribution, he fully justifies the expectation. On the matter of diagnosis the essay is fruitful, but it is most interesting in relation to the controversy which is now going on as to the cause and origin of phthisis pulmonalis. In this controversy, which is likely to become historical, Dr. TROUP holds a position at once independent and thoughtful. With true ardour, as his book on sputum indicates, he entered the ranks of

those who thought that the development in one particular direction of the little corner of natural history which treats of the deposit of germs and increase of bacilli in the pulmonary tissues of phthisical subjects might open up a clue to the unravelling of the nature of the most formidable disease, with one exception, of our time; and, although his ardour may not have abated a jot, his excellent common sense has controlled it and has brought him, apparently, to the admission that the extreme and dogmatic views which prevailed a few years ago cannot now be declared with the high hand and tone which for a long season confused the whole argument and led many who were willing to listen gratefully to leave the arena disgusted with the childish conceit of the new teachers, and half inclined to look upon them with their prophecies, promises, and idols, as mere creatures of impulse who thought, in their vanity, that they were going to carry all before them and to set the old and long-tried clinical school of medicine at complete defiance, or bring it into ignominious contempt.

Dr. TROUP sets out by giving a smart rap on the knuckles to those trimmers on the germ hypothesis who have suggested that some extra-bacillary matter secreted or excreted during the growth of the bacillus is the cause of the mischief, not the bacillus itself. "This suppositious matter," he says, "seems so identical with the bacillus that it is never noxiously operative save in its presence, and is transmitted from generation to generation of bacilli in pure cultivations. If this chemical virus therefore does exist, it ought to be easily demonstrable in pure cultivations, and should be searched for in them alone. To examine sputum and find in it alkaloids of a poisonous nature is not scrupulous enough; there are many micro-organisms which flourish side by side in expectorated matter, and it is random work to say that any noxious matter detected is the derivative of one microbe rather than another." To those who suppose that an alkaloid must be constructed out of material secreted by a bacillus this argument is no doubt a difficulty which they will find very hard, if not impossible, to meet; and as we must assume that, with those who do not want such material for the production of the alkaloidal poisons the author has no desire for controversy, he stands, on his own side of the question, upon a sound and logical basis. But while putting forward the statement, about which he believes there can be no dispute, that inoculations of pure cultivations of tubercle bacilli, or of tubercular stuff containing them, into animals susceptible of the disease will produce tuberculosis, Dr. TROUP sees the difficulty of extending the argument further, and boldly admits the difficulty of making the experimental knowledge account for the every day fact of the development of spontaneous localised tuberculosis, a chronic phthisis for instance in a man, or a lower animal, who has not been subjected to the direct process of inoculation. On this point his views are of peculiar importance. He confesses that there is no reasonable probability that in consumptives the bacilli have been inhaled, and that the lungs have been fertilised by the bacilli or their germs from without, as soil may be fertilised, if we may so express it, by the seeds of mustard and cress; and he rather cruelly demolishes the mustard-and-cress idea, so brilliantly upheld not very long since, by reciting, in brief, BAUMGARTEN'S experiments, which conclusively prove that except when the forced inhalation of great masses of bacilli is carried out there is no chance of inducing tuberculosis of the lung, and that it cannot therefore be assumed that pulmonary tuberculosis in the human subject is propagated in this manner. But if there be no direct inhalation of the kind named; if the free and easy mode of conveyance of tubercular disease by direct pulmonary fertilisation must be given up as devoid equally of experimental and of clinical proof, how does the tubercular mischief arise in the thousands upon thousands of persons, between 40,000 and 50,000 a year in England and Wales alone, who suffer from it? Dr. TROUP supposes other possible factors. One of these is the use of milk of tubercular mothers of the human species, and the eating of flesh and drinking of the milk of tubercular animals, by which the specific bacillus may be introduced into our bodies. Another view is that phthisis may be a secondary infection, from pre-existing cheesy tubercular foci, in some distant region of the body, a view which, as it is admitted, only throws back the question a stage, and does nothing towards its solution. But the most curious hypothesis of all is that the bacillus itself, and not a mere disposition to its growth, may be inherited. "This," says Dr. TROUP, "*is not unthinkable*"; and he adds that in a recent communication BAUMGARTEN informs him that he stands almost alone in Germany in the adoption and advocacy of this view—a view which one of the most determined of the opponents of the bacillus origin of phthisis suggested four years ago in this country as the only logical ground on which the hypothesis could be sustained, on the argument that if the germ of the bacillus can be transmitted to others through man as a progenitor, then the germ of life itself must be of the same nature, and the old speculation of diseases as existences or entities is open to revival, after ages of banishment, as sound medical doctrine.

We notice this view of the direct propagation of the bacterial germ, *ab genitura*, in order to show the straits to which the consistent advocates of the bacillus hypothesis, in its application to pulmonary consumption, are driven in their endeavours to connect the results of what they consider conclusive evidence from experimental research, with the every day facts of practice. And, if on the question of such reconciliation we cannot feel that our northern *confrère* has led us out of debateable ground, we are not less grateful to him for having given us additional food for thought on one of the most absorbing subjects that can possibly occupy the mind of the profession of medicine. In connexion with this point we may call attention to an article published in our impression of June 4th, 1887, p. 1141.

Of a part of Dr. TROUP'S paper which is not speculative, and which deals with the diagnosis of pulmonary consumption by the microscopical determination of elements of elastic tissue and of bacterial elements in expectorated material, we would speak with much commendation. The combination of the two elements as specific signs of disease is a new point in diagnosis, and may render it absolute in those early stages of pulmonary phthisis when the stethoscope yields indications that are doubtful, and at the very moment when the precise treatment that is demanded is so critical that life may actually

depend upon the turn which diagnostic skill may give to practical recommendation and direction.

A REPORT on an outbreak of enteric fever at Buckingham, by Dr. PARSONS,[1] has just been issued by the Medical Department of the Local Government Board, and it has some features of very considerable interest. The outbreak may be divided into two portions, each having different characteristics and each due to a different cause; the first and the most interesting, from an etiological point of view, being due to the specific contamination of a local water service, and the second having its source in an extension of the disease under sanitary circumstances which go to show that Buckingham is a place to be avoided. Into these special sanitary circumstances we do not propose to enter; they are dealt with at length in Dr. PARSONS' report, both from an administrative point of view and with the intention of indicating, by a process of exclusion, that they were not concerned with the earlier and more important prevalence of the disease.

Premising that Buckingham has for years past had an amount of fatal enteric fever in excess of that prevailing in England and Wales generally, certain definite but isolated occurrences of the disease are referred to in November and December, 1887, until we come to the case of a boy living in a district called Church End, the character of whose illness was not at first recognised, but who appears to have had some very typical indications of enteric fever, and whose stools—pea-soupy and streaked with blood—were early in January of this year cast into a privy having communication with a drain of "imperfect construction, full of sediment, and often blocked." Church End receives almost all its water supply from a copious stream rising in a spring in the hill side, and which is brought down—first in a rubble-stoned drain, and then in one of socket pipes—to the iron spout from which it issues. This spring is locally referred to as the "Bath-lane Spout," and at its source it is above suspicion. But, according to the description and to certain illustrations embodied in the report, the line of the conduit is crossed some fifty feet above the spout by the drain, which received, among other things, the sewage and privy contents of the house where the unrecognised case of enteric fever occurred. The drain is, in the greater part of its course, only laid with common field pipes; and, extraordinary to relate, immediately over the course of the water conduit was a catch-pit inlet with a bottom of bare earth only. Examination into the details of construction, both of the conduit and the drain, showed that leakage from the drain into the water conduit must often have taken place; indeed, at one point the earth in which the water pipes were lying beneath the drain was "black, fetid, and sewage-sodden." In January and February some eighty people, living in twenty-five households, were attacked with enteric fever in three thoroughfares in Church End, twenty-two cases occurring just outside the borough boundary, and, including extension of the disease to other parts of Buckingham, there had been 114 cases at the date of inquiry.

Some interesting lessons may be learned from this occurrence. First, there is the futility of trust in the negative results of chemical analysis of a single sample, or even of repeated samples, of water which has been examined with a view to the discovery of a source of mischief which was in operation some weeks previously. By the end of February, when the main evil had been produced, an expert in chemistry could only discover that the sample submitted to him had the characteristics of a first-class water; but even if the analysis had been made when specifically diseased excreta were actually finding their way into the water, it is well known that the specially dangerous character of such a supply could not have been detected. Another difficulty in the way of such chemical analysis, even so far as ordinary chemical indications are concerned, lies in the fact that in a rapidly-flowing spring like that which found its exit at the Bath-lane spout, there could only have been, in any given sample, a relatively small quantity of the dangerous quality which it was important to detect, this being mingled with a large body of an otherwise very pure water. And this leads to the second point of interest—namely, the accumulating evidence as to the comparative mildness of enteric fever epidemics which are due to a water which can only contain small portions of a specifically diseased particulate material, and this especially in cold weather. On this point Dr. PARSONS quotes the experience which was derived on the occasion of the well-known epidemic at Caterham in January and February, 1879, when it appeared that "by far the majority of the cases were of an exceptionally mild character, and, although when subjected to examination they were ascertained to be genuine cases of enteric fever, it is certain that had it not been for the prevailing epidemic no medical advice would in many cases have been sought, and some of the patients would not even have taken to their beds." This experience was characteristic of the epidemic at Church End, where it was also found, as in the case of Caterham, that the majority attacked were women and children. "This distribution of the disease," again quoting the Caterham report, "is by no means uncommon in epidemics in which water is the vehicle in which the infection is conveyed, for children drink much more water than adults, and, amongst the latter, men as a rule drink less than women." The Bangor epidemic, in 1882, also referred to by Dr. PARSONS, is another instance which aptly illustrates the points adverted to, and which are well worth remembering during investigations into the causes of enteric fever occurrences.

FROM time to time one hears complaints more or less distinct of the scientific temper—the scientific method—the demands which Science (spelt with a capital letter) makes, or the results at which she arrives; but it is seldom that a writer of eminence embarks upon such a root-and-branch denunciation as Miss COBBE has fulminated in the *Contemporary Review*. This lady alleges that the modern scientific spirit is intrusive and oppressive in regions where it has no proper work, predominant in others where its place should be wholly subordinate; that it has "sprung a mine under the deepest foundations of morality"; that it has elevated bodily health into the *summum bonum*; that it threatens the production of a hard and pitiless temper; for that, "with some noteworthy exceptions, the Scientific Spirit is callous"; that "Irreverence appears to be another note

[1] Eyre and Spottiswoode, East Harding-street, E.C.; Adam and Charles Black, Edinburgh; Hodges, Figgis, and Co., Dublin.

of the Scientific Spirit"; that the same abstraction is responsible for the brushing away of "a certain modesty which has hitherto prevailed among educated people"; and, lastly, that its advance has been "the signal for a subsidence of religious faith and religious emotion." Upon the assumption of such grounds of objection, one cannot feel much surprise—save at its moderation—at the conclusion to which all these considerations conduct our author, that Science has given us "many precious things, but she takes away things more precious still."

It often happens that persons who write under a strong impulse of emotion make the fact of their being deeply moved much clearer than the reasons for their feeling. This appears to us to be the case with Miss COBBE on the present occasion. No one who reads her paper can doubt the strength of her sentiment, but of its depth the evidences are far less manifest. For the dreadfully demoralising tendencies of Science she appears to draw upon the single instance of Mr. DARWIN'S æsthetic deficiencies. From the life of that great man she extracts the following passage: "Up to the age of thirty, or beyond it, poetry of many kinds, such as the works of Milton, Byron, Wordsworth, Coleridge, and Shelley, gave me great delight, and even as a schoolboy I took intense delight in Shakespeare. I have also said that formerly pictures gave me considerable, and music very great, delight. But now for many years I cannot endure to read a line of poetry. I have also almost lost my taste for pictures or music." And upon this solitary instance, supplemented here and there with vague and generalised observations, Miss COBBE builds her terrible indictment. Surely there is some little freedom here. Must it be inferred, because Mr. DARWIN lost on the æsthetic side as he gained in the scientific, that therefore the tendency of advancing science must in every case, or even generally, be adverse to the higher nature of men? "Must he be shorn of the glory of humanity who is ordained her (Science's) priest?" asks Miss COBBE. We can only reply, Must he? Mr. DARWIN represents one particular type of scientific man. In grasp of facts and patience of research he was almost without a rival. It may well be that had his energies been diffused over the whole field of intellectual life, he would have been less successful than he was in the particular path in which he did, in fact, walk. But surely it is as fair to regard the repression of the æsthetic as the *cause* of the great development in him of the scientific side, as it is to regard the development of the scientific as being the cause of the repression of the æsthetic. Nay, it is more so. For everybody can see that the gradual weaning of his affections from other topics would have had a direct tendency to promote that concentration of attention on the remaining branches of study which his career so strikingly displays; but it certainly requires a clearer discernment than we can boast to discover why a knowledge of the origin of species or the habits of earth-worms and sundews should make a man "blind to the loveliness of nature, deaf to music, and insensible to poetry." Our best efforts to follow out the train of consequence only result in a confirmed conviction that we have here an absolute *non sequitur*.

But Miss COBBE is by no means satisfied with mere generalities. Warming to her theme, she launches a violent attack upon the medical profession. "The political press has adopted the practice of reporting the details of illness of every eminent man who falls into the hands of the doctors, and affords these gentlemen an opportunity of advertisng themselves as his advisers. The last recollection which the present generation will retain of many an illustrious states man, poet, or soldier will not be that he died like a hero or a saint, bravely or piously, but that he swallowed such and such a medicine and perhaps was sick in his stomach. Death-beds are desecrated that doctors may be puffed and public inquisitiveness assuaged." This at least is unmistakable, and it is the one thing for which, in referring to it, we have to thank Miss COBBE. A charge so baseless does but little harm if it is unequivocally made. For what is the patent and indisputable fact? Is it not that at the present day those newspapers which Miss COBBE denotes political do, as a matter of fact, serve up to their readers every kind of literature that is of the smallest public interest? The complaint is that the diseases of eminent men are made the subject of accurate description and discussed in a way that is quite modern. We deprecate no less strongly than does Miss COBBE the publicity sometimes thus given to medical details of disease and its treatment. But we cannot forget that it is only part of a still larger fact. Is there not more law reporting in one week's file of *The Times* to-day than there was in a whole year's journalism at the beginning of the century? A third-rate politician cannot make an after-dinner speech to-day but it is published in a thousand newspapers and served up at a million breakfast tables on the following morning. And what is the increased publicity of medical bulletins of which Miss COBBE complains but the development in a particular connexion of the journalistic enterprise? That angry reference to the puffing of doctors is, no doubt, creditable to Miss COBBE'S feelings, but at the expense of her discernment; and we, for our part, feel sufficiently confident of the general excellence of Science to be sanguine that she will survive Miss COBBE'S castigation.

THE question of the nature and cause of malignant new growths is attracting a large share of attention from pathologists of the present day. The older controversy between localists and constitutionalists has practically died out, or rather has resulted in a sort of *via media*, wherein the truth of the localistic doctrine is maintained, modified it may be by the view of some underlying proclivity or tendency, which in a sense may be held to be constitutional, inasmuch as it expresses the condition of the tissues of the individual who becomes the subject of malignant disease. But there is little support nowadays given to the notion that cancer is a "blood disease," whilst the view that there is any special cachexia in sufferers from cancer has been practically abandoned. In a suggestive paper contributed to our columns last week, Dr. BRAITHWAITE attempts to carry the inquiry a stage further, so as to offer an explanation not only of the mode of growth of cancer, but to a certain extent of its cause. His remarks, which are based upon the epithelial character of cancerous growths, apply, it will be seen, only to those malignant formations; they leave out of the reckoning the large group of equally malignant tumours—the sarcomata. Indeed, the more the subject is studied the wider appear the differences between carcinoma and sarcoma, differences

which must depend on something more than the epiblastic or hypoblastic source of the one, and the mesoblastic origin of the other. For although VIRCHOW and others long ago maintained the connective-tissue origin of carcinoma, the instances are few and far between where this type of new growth can be proved to have arisen apart from epithelial or glandular tissues. That there are exceptional cases, especially in the osseous system, we fully believe; but in view of the general truth of the doctrine of the epithelial origin of cancer, such aberrant growths may perhaps be best explained on COHNHEIM'S hypothesis of embryonic rudiments. As to the growth and extension of cancer, Dr. BRAITHWAITE shows that epithelium cells, once they become removed from the normal limits imposed on them by the basement membrane, must, from their nature, continue to grow unchecked. To be sure, on a free surface and in a gland, they do this, and their continual renewal is one of the most striking evidences we possess of nutritional activity. But where there is no free surface, and the cells are lodged in the interstices of a vascular connective tissue, from which they are no longer separated by a basement membrane, that they should continue to develop with a luxuriance more or less great in accordance with the individual nutritive powers is not only probable, but most reasonable. Indeed, once the epithelium has transgressed the bounds of the basement membrane, it must almost of necessity infiltrate the tissues in which it comes to lodge. According to its primary seat, whether this be a gland, or a mucous surface, or the skin, so will it reproduce its original characters when it becomes so displaced. But being no longer, as it were, held in check, by having to subserve a definite function, its new development is irregular and wild, and the symmetrical cell arrangement of the physiological formation is often barely to be recognised in the disorderly massing of cells that constitutes the pathological product.

A great deal, then, upon this view, depends on the lack of integrity of the basement membrane. This delicate structure literally forms the line of demarcation between normal and morbid cell growth. So long as it persists, so long are the cells prevented from exercising their natural powers of proliferation at the expense of the integrity of other tissues. Dr. BRAITHWAITE suggests various ways in which this barrier, delicate though it be, may be broken down, and, in addition to mechanical or traumatic agencies, he hypothecates a diminution in its resistance from general nutritional failure. This is a new and ingenious reading of the old term "constitutional taint." The view is withdrawn for the moment from the cancer cells; it is centred on the structureless hyaline substance that forms the outer boundary of the mesoblast. If from nutritional defect there be weak places found in this rampart, then the way is open for the invasion of cells which become "malignant," not by virtue of any new property, but by the simple continuance of their normal capacity for growth, pursued under circumstances which offer no obstacle, but rather every facility, to their indefinite expansion. Yet, says Dr. BRAITHWAITE, it is probable that this proliferating power may be increased or stimulated by conditions of the environment. He does not allude to any mysterious force or irritant as exciting such proliferation; the parasitic theory of cancer is, on his view, not needed to explain the unnatural cell growth. The cause of cancer, in fine, is to be sought in nutritive excess on the one hand—the high and luxurious living of modern times being a large factor in the production of such excess,—combined with diminished vital resistance of tissues, on the other. This solution may appear to be paradoxical, but pathology (at present) is full of paradox; and in all but one particular we must confess that Dr. BRAITHWAITE'S reply to the question "What is cancer?" is at least as satisfactory as the answer which would point to its being a product of bacterial infection. That one particular is the character of malignancy as expressed in secondary formations. No explanation of the disease can be a working hypothesis which does not cover this the most remarkable of its features. We cannot admit that epithelium normally has the power of infecting distant parts, or even (as COHNHEIM and MAAS showed) that the transplantation of living epithelium into the substance of an organ by embolism will result in the production of a new growth capable of indefinite increase. The question "What is cancer?" embraces the more important question, "What is the cause of cancerous infectivity?" and that question, we venture to say, has not as yet received an answer.

Annotations.

"Ne quid nimis."

THE ROYAL COLLEGE OF SURGEONS.

WE are glad to see that the Members of the College of Surgeons have enlisted on their side the sympathy and support of Lord Randolph Churchill. In the House on June 28th he asked if the claims of the Members of the College to take part in the election of, and to representation on, the Council of the College had been recognised in the Supplementary Charter. Mr. W. H. Smith replied in the negative, whereupon Lord Randolph Churchill gave notice that on an early day he would move that a humble address be presented to Her Majesty praying Her Majesty not to grant a Supplementary Charter until such time as full inquiry had been made into the constitution of the College. Mr. W. H. Smith repeats the puerile plea, that there is no occasion to postpone the grant of a Charter which does not affect any of the questions which have been matters of controversy. Under this rule of procedure no settlement of disputed matters can take place. This plan would fail in the nursery, and must fail at the College. The Council of the College has pertinaciously declined to entertain the just and increasing demand on the part of the Members of the College for representation—a moderate demand on their part, and one not lacking in good argument or in repeated precedent. The Council has been compelled to apply for a new Charter to enable it to hold more revenues. What could be more natural than to opportunely grasp the idea of settling (up to date) the claims of the Members? And what could be more legitimate than for them to press their views at so convenient a time? The Council, however, wish to retire gracefully and leave all but the financial element as before. To this the Members say No, emphatically; they feel that if the Council of the College, having a present interest in conciliating opposition, and being compelled to seek for a new Charter, thus shelve their claims, it will be far more difficult to impress their views when the Members force the hands of the Council, to reopen the Charter at

an early date, and to do *then* what it ought to do *now*. Meanwhile, as the Council of the College is the persistent opponent of moderate reform, the motto of all who wish well to the College should be—*Reformandum est concilium*.

The general meeting of the Association of Fellows was held in the Arbitration Room, at the Inns of Court Hotel, on Thursday, the 5th inst., and was largely attended by metropolitan and provincial Fellows. There were present many surgeons of representative views and of distinguished repute; a glance around the room betrayed no expression of excitement or of fierce intolerance, but rather the serenity of minds working in and for a good cause, with the anticipation of eventual success in their object. The programme of the Association of Fellows is well known now to the profession, but a statement of its objects and claims for support was placed by the chairman before the Fellows, and a completed list of rules was accepted by the meeting (a report of which appears in another column). The proceedings were characterised throughout with much unanimity; and we may anticipate a further accession of Fellows to the Association, especially so, if the good tone of the meeting of 1888 may be taken as a sample of what is to follow at successive annual gatherings. At the conclusion of the business not a few Fellows expressed their regret that such orderly deliberations on collegiate matters had not been conducted *within* the walls of their own College. On the present occasion, the Fellows subsequently traversed the square, and took their part in the election of Councillors then proceeding at the College.

CHANGES IN THE EXAMINATIONS OF THE UNIVERSITY OF LONDON.

ONE result of the agitation in favour of increasing the facilities for obtaining degrees by London medical students has been the revision of the present scheme of medical examinations by the University of London, and the Senate has adopted the necessary resolutions for making great alterations in every one of these examinations. Of course, they cannot come into effect until they have been officially announced in the University Calendar of next year. At the Matriculation Examination, "Botany" will be added to the optional subjects. At the Preliminary Scientific M.B., "Mechanics" will be greatly reduced, the mathematical character of the questions in Experimental Physics lessened, a practical examination in the use of physical instruments introduced, and the syllabus in Biology revised. The examination will be divided into two sections: (*a*) Chemistry and Physics; (*b*) Biology; and candidates will be allowed to present themselves and pass in either section or in both. At the Intermediate M.B. Examination the pass and honours papers will be offered to every candidate, so that he may make his selection at the examination, and he will not be placed in the honours division unless he obtains half-marks. This part of the scheme seems rather complicated, and we shall be anxious to see how it will work; but it is a great improvement on the method adopted for last year and for the ensuing examination on Monday next. The requirements in Organic Chemistry and Materia Medica will be reconsidered and modified. The M.B. Pass Examination will be held twice a year. At the M.D. and M.S. Examinations, candidates will be allowed to submit a thesis upon a subject in Medicine, Surgery, Obstetrics, or Psychological Medicine, which, if accepted, will exempt them from the written and clinical examination in Medicine and in Surgery for the respective degrees. This is a somewhat surprising alteration, and, unless the character of the thesis be maintained at a very high standard, must inevitably lower the prestige of the examination. But perhaps the most startling change is the admission of registered medical practitioners of three years' standing and twenty-five years of age, who have passed the Matriculation and Preliminary Scientific Examinations, to the subsequent examinations, on producing certificates that they have gone through the required curriculum at any time previously—i.e., either before or after having passed the two preliminary examinations. These alterations are wisely conceived in increasing the facilities for taking degrees at the University, although they will probably lower somewhat the standard of the examinations, but they of course only touch the fringe of the difficulty as to the proper means for London medical students to obtain degrees on terms and conditions similar to those by which they may be acquired in the other centres of medical education in Great Britain.

THE CAUSES, DEGREES, AND MEANS OF SLEEP.

THE probable causation of sleep is a subject which has often in the history of physiological research attracted the efforts of scientific speculators. It cannot be said that, after all, we are now able to define the processes involved in its restorative influence; but some suggestion of its nature is, nevertheless, within the reach of rational explanation. Most of our readers have doubtless formed some opinion on this subject, and have, perhaps, accepted as a provisional creed one or other of the theories advanced with regard to it. To some it may appear that the accumulation of waste products in the brain is enough to account for sleep. Deficient oxygenation offers another tempting hypothesis. Each of these processes, no doubt, may exert a certain soporific power, and probably thus operates in its degree; but it is difficult to see how either can be taken to afford the sole interpretation of that state of rest which comes with singular regularity of recurrence to all more or less, whether sick or healthy, idle or actively employed. There is something to be said also for the theory that sleep is a consequence of cerebral anæmia. The pathological drowsiness of hemicrania, of epilepsy, and some hysterical states favours this view, as does also the fact that pallor of the fundus of the eye has been noted in connexion with natural sleep. These observations do not, however, settle the question whether such anæmia is commonly a cause or merely a part of the general relaxation of energy implied in the soporific process. So far, we can only say of sleep that, following and preceding a period of wakefulness and constant stimulation of the senses, it represents a transient interval of rest from the activities of tissue change. It therefore corresponds with the quiescence of every organ and more especially of the nervous system, and with a timely languor of circulation in the resting tissues. By the gradual changes of evolution it has now virtually become a mere habit of mind and body. At first it was doubtless the outcome of exhaustion and an expression of the well-known law, which it still fairly illustrates, that action is balanced by reaction. The opposite condition of sleeplessness will commonly be found to originate in some continually acting cause of nerve excitement. This may consist in the presence of a local irritation or very usually in the abnormal irritability of a sensorium over-wrought and unduly sensitive to the most trifling impressions. We have already spoken of morbid somnolence in its relation to certain diseases, and have alluded to its connexion with a defective cerebral blood supply. We might also refer to instances of an altogether different condition, in which anæmia and sleeplessness are closely associated. This fact is sufficient to show that healthy sleep requires a certain due nutrition of brain tissue, and that cerebral anæmia or hyperæmia has with respect to it only a relative significance. The influence of various toxæmic states must also be remembered in dealing with this subject. Whether due to impairment of function in the lung, liver,

or kidney, the only reliable remedy for inconvenience thus caused is, of course, to be found in correcting the failure of excretion. Whatever, indeed, the form of error, be it the want or the excess of sleep, relief by means of so-called sleeping-draughts and the like is and must be only palliative. The one effectual means of cure in any case is no mere drug, but a method, and consists in the detection and removal of the source of mischief by a well-considered system of treatment.

HULL SANITARY ASSOCIATION AND FUTURE SANITARY ADMINISTRATION.

THE Honorary Secretaries of the Hull Sanitary Association refer, in a letter addressed to us on June 26th last, to the fact that we in a previous issue had expressed the opinion that the Local Government Bill provided that in cases where the power of compulsion under such sections as 42 and 299 of the Public Health Act, 1875, were not vested in the newly constituted County Councils—as, for example, in the case of boroughs which will remain exempt from the superintending county body—such compulsory powers remained as heretofore with the Local Government Board, and they imply that we wrote to that effect by inadvertence. This was not the case. Annexed to the third part of the first schedule of the Bill, to which our attention was drawn, will be found a number of "exemptions and modifications"; and although we admit that the tenth paragraph under that heading is a clause that might itself have required modifications, yet it was understood that the words "where a County Council are the sanitary authority.....the power in this part of this schedule mentioned shall continue in the Local Government Board, and shall not be transferred to the Council," were intended to cover the point to which we adverted. The matter is, however, now of less importance than when we made our first comments on the subject, since the transference of such powers as those adverted to remains in abeyance for all districts alike.

A NEW IDEA IN HOUSE-BUILDING.

AN American physician, Dr. Gouverneur M. Smith, following in the footsteps of Dr. B. W. Richardson, has published an interesting little paper on the advantage of utilising the upper storeys and roofs of modern houses in the interests of health and recreation. After alluding to the defects of the present system of building, with its frequently dark, dusty, and overcrowded attics, he proceeds to suggest what is in several ways a better arrangement. This consists in securing free ventilation by means of shafts, in a great extension of window surface, and in providing convenient access to the roof, which is to be laid out as a pleasure-garden. The roof space thus gained would form an agreeable promenade in summer, while the bright and airy upper rooms would be equally suitable for nurseries or play-rooms. Dr. Smith dwells on the amenities afforded by such a well-kept roof-garden to the dwellers in tenements. At the same time he is not forgetful of possible inconveniences arising from a promiscuous association of neighbouring tenants on this common ground; but he argues that, as a rule, the scheme is not open to any really grave objection on this account. The point is necessarily one which experience alone could settle. So far as we can learn, however, a similar principle in house-building already adopted in this country has not been discredited by any serious difficulties of the kind in question. It has always appeared to us, however, that in the event of fire the very thorough ventilation allowed by this plan of construction could not but tend to assist the conflagration. This drawback might, perhaps, be met by some specially contrived safeguard. The advocates of the project are also, doubtless, prepared to guarantee that houses constructed on this plan will not be too cold or draughty; for, unless objections like these can be satisfactorily disposed of, the proposed reform is not likely to prove as useful in practice as it looks plausible on paper.

THE OXFORD AND CAMBRIDGE CRICKET MATCH: A POSSIBLE SOURCE OF INFECTION.

WE have it from an eye-witness that on Sunday last, the day before the Oxford and Cambridge cricket match should have begun, there were between one and two hundred carriages drawn up, horseless, outside Lord's Cricket Ground, *en queue*, awaiting their turn to be taken into the field early on the Monday morning. In several carriages groups of ragged urchins had assembled, and were enjoying themselves by "bear fighting" with the cushions. Our informant called the attention of a man and his wife, who were the only caretakers of one solitary carriage, to the state of things going on around, and to their credit, be it said, they speedily cleared the vehicles of their unwholesome occupants. No policeman or detective was in sight. We should think it would be worth while for the proprietors of these hired carriages to combine and engage an officer on their own account, if only to protect their property from damage. From our own standpoint we cannot but think that such incidents may possibly explain the advent of scarlatina, small-pox, and other disorders in families where every precaution against infection is invariably observed.

SMALL-POX AT MILAN.

NO Italian city receives so many British subjects throughout the year as Milan, and though these seldom remain more than a day or two, being simply birds of passage, their sojourn is long enough to make them liable to one or other of the diseases apparently endemic in the city. Small-pox and typhoid are never wholly absent from the Milanese population; the former especially having periods of recrudescence, sometimes so sudden and so pernicious as to amount to positive "explosions." One of these has declared itself within the last week, and, as usual, there is a whipping-up of the people to the vaccinating-stations in the vain hope that such spasmodic and unsystematic precautions can stay the disease. It is deplorable to witness the appeals addressed by the sanitary authorities to the population, urging them to do at the eleventh hour what should have been done effectively at the first. With the educated classes these appeals are scarcely required, for by the Italian law no child can enter a school for education, and no youth can fill a position of trust or be enrolled in the civil or military services, without an authentic certificate of vaccination. But how about the proletariat? How about the thousands of the lower orders who never go to school or never see the inside of an office, private or public, and whose insanitary ives and surroundings make them candidates for infectious disease and active agents for its spread? Legislation moves slowly in Italy, and it will be long before the salutary provisions in Bertani's hygienic code are translated into fact; but meanwhile a stimulus might be applied which, if operative on such a populous and important centre as Milan, might react for good on the minor cities throughout the peninsula. That stimulus is the refusal of foreign, particularly British, travellers to stop at Milan, with the consequent diminution of the custom they bring to it, until she stamps out the variolous and typhoid preserves she continues to harbour. It was the dread of such a falling-off in her visitors that at last obtained for Florence the potable water and the improved sanitary regulations for which her

own citizens so long and so fruitlessly agitated. Let the British tourist or traveller know, therefore, that Milan is at present severely visited by small-pox; that the one small-pox hospital she has for the isolation and treatment of such cases is miserably inadequate; that the lazaretto for which her communal council two years ago voted a sum of 600,000 francs (£24,000) will not be finished for another twelve months; that her physicians are protesting against the scandalous mode in which small-pox patients are transported from their homes to the hospital—the car in which they are conveyed being taken through the most populous quarters at the most crowded time of the day; that the burial of the dead from small-pox is conducted in a similarly public and perilous manner; and that, finally, her very bad water supply has now produced a typhoid epidemic, which is found at its worst in the neighbourhood of the railway station! Let these facts be made public; and let the stream of foreign travel on which Milan fattens, as Lower Egypt does on the Nile, be deflected into another channel; and then it may come to pass that pecuniary loss to the city will impart a stimulus to her sanitary precautions which a sense of public duty has so long prescribed in vain.

A NEW MATERIAL FOR ABSORBING AND DEODORISING FÆCAL MATTER AND URINE.

AMONGST the many materials that have been suggested and used from time to time for the purpose of absorbing and deodorising fæcal matter, not one perhaps is so interesting to those engaged in sanitary science as the one whose properties were demonstrated at a meeting held in St. Stephen's Hall, Princes-street, Westminster, on Tuesday last, inasmuch as the material used—viz., common slag—has puzzled for a long time many a practical chemist and engineer to know to what purpose it may with profit be applied. We remember hearing, however, some months back, of the application of crushed slag as a dressing in agriculture for heavy clayey soils. It is said to be extremely porous, rendering the soil more absorbent, and is also of manurial value on account of the notable quantity of phosphoric acid it contains. This most important subject of dealing with the sewage of our towns has been so much discussed, and is so well worn, that to point out the advantages or disadvantages of the dry-earth system over that of the water-carriage system were superfluous. Suffice it to say, the inventors of this new material for the defecation of sewage matter (Messrs. M'Gregor and M'Arthur, of Dundee) take for granted that the advantages of the former system, at least in many cases, are unquestionable. They further claim for it the following additional advantages: (1) the cheapness of the material, the cost being roughly estimated to be from 5*s.* to 10*s.* per ton, including crushing and carriage; (2) its supply being practically inexhaustible; (3) its porous property, which, independent of (4) its manurial qualities, renders it valuable to clayey soil. Dr. Redwood gives the following analysis of the material after use:—

	Per cent.
Fixed inorganic matter, after ignition	71·68
Insol. silicious matter	60·50
Lime	2·85
Phosphoric acid	2·31
Organic matter, with ammonia and water ...	28·32
Ammonia, ready formed	·08
Organic nitrogen...	·13
Equal to ammonia	·15

A sample was exhibited which had been in use five weeks ago, in which we failed to detect the slightest smell. The method of using it is similar to that adopted in the other earth-closets. The pan is first charged with a certain quantity of the crushed slag, and after use another quantity is put in, the total quantity necessary, according to the inventor, being a third less than ordinary dry earth—that is to say, six persons would require one-third of a hundredweight of defecating matter per week. These claims are so strong that a careful trial of this method, and, indeed, of any new method which aims at the healthy as well as useful disposal of so great a nuisance from our midst, is well worthy the consideration of every sanitarian.

THE SUPPOSED TRANSITION OF BENIGN GROWTHS OF THE LARYNX INTO MALIGNANT.

IT has been suggested that benign growths of the larynx are liable to become transformed into malignant tumours as a result of intra-laryngeal operations for their removal. This suggestion, if proved to be well founded, would do much to show that Van Bruns's introduction of intra-laryngeal operation for tumours was not the great improvement it has been held to be; but, on the contrary, a very mischievous procedure. The plan of collective investigation has been employed to throw light upon this subject by Dr. Semon, the editor of the *Internationales Centralblatt für Laryngologie, &c.*, and in the July number of that journal the results of the inquiry are briefly given. These are so important that the profession ought at once to be made fully acquainted with them. Returns have been furnished by 107 observers, who have together recorded 10,747 cases of benign growths in the larynx and 1550 cases of malignant tumours. Of these 10,747 cases of benign growths, 8216 have been submitted to intra-laryngeal operation, and among this number there are 3382 cases of papilloma. An apparent transformation from benign into malignant growths has been noticed in thirty-two instances. Each one of these cases must be submitted to a very careful criticism, but, apart from that, as many as sixteen of the number are marked by those who record them as "doubtful," and they cannot therefore be used. It is quite open to question whether the remaining sixteen cases do not include examples of "mixed" growths, and it is noteworthy that the tables include twelve cases not submitted to intra-laryngeal operation, in which a similar change in the nature of the growth was thought to be noticed. But putting aside this view altogether, we are met with this supposed change in one case out of every 513 cases thus treated. It must be at once admitted that if the operation had any appreciable influence in modifying the nature of a neoplasm, the proportion of cases in which it would be observed would be much greater than this. Considering the enormous advantages the intra-laryngeal method of operating possesses, it is a matter of considerable satisfaction that it is thus conclusively shown not to be attended with the grave danger that has been suggested in some quarters.

ISOLATION ARRANGEMENTS AT TEIGNMOUTH.

THE Teignmouth Local Board of Health are in difficulties as to their hospital for infectious diseases. It must be a structure of very limited usefulness, for it is stated to be capable of accommodating two patients only, and these must be of the same sex. It is also worse than useless, for its sanitary arrangements are described as most defective. Under these circumstances the Sanitary Committee recommended that it should be done away with. On this a discussion arose, and the fear of being without a hospital, and of resulting complaints on the part of visitors, led to the matter being referred back to the Sanitary Committee. We imagine, however, that visitors will not be less inclined to complain should it transpire that so insufficient and unwholesome a structure is retained on the plea of promot-

ing health. It would have been far better to have decided at once on the provision of a small, useful, and sanitary building. The question of a floating hospital transpired during the discussion. As to this, we would advise the sanitary authority to consider Mr. Henry Armstrong's contribution to the last report of the medical officer of the Local Government Board, and the description there given of such a hospital. It should also be remembered that a mere "hulk" does not readily lend itself to the due separation of different diseases, to laundry work, and other matters essential to a hospital for infectious diseases.

THE PUBLIC HEALTH BILL.

IT is stated that there is considerable opposition in the dairy trade to the proposal of the Public Health Bill to make it obligatory on any cowkeeper, purveyor of milk, or occupier of a dairy, milk store, or milk shop, to supply a full and complete list of the names and addresses of all his customers whenever it shall be certified by the local medical officer of health that the spread of infectious disease is attributable to the milk supplied. The proposal is perhaps open to the objection that no opinion ought to be formed until careful inquiry has been made; and this, of course, cannot be done until the milk supplies and their distribution are known. But we believe if the Legislature can be made to realise the important part which milk plays in the dissemination of infectious disease, it would not hesitate to arm the medical officer of health with the powers that are sought. If milk vendors fear that a house-to-house inquiry, conducted especially in the neighbourhood of a particular milk supply, would tend to prejudice it, even if it were subsequently discovered that this milk had no concern with the outbreak under investigation, they should plead for compulsory notification of cases of infectious disease rather than for the prevention of an amendment of the law of the character proposed. A medical officer of health, already possessed of information as to the existence of all cases of infectious disease in his district, would find it unnecessary to make the inquiry which the dairy trade fear, but would at once, on receipt of the list of customers of any business, be able to see how far the milk supply was likely to be concerned in the occurrence. For this purpose the proposed Act should preferably not make the medical officer of health wait until he is of opinion that the disease is attributable to the milk supplied before empowering him to demand a list of customers, but should afford him an opportunity of considering this point by the supply of such list whenever he is of opinion that the infectious disease *may be* attributable to the milk. No injury could possibly be inflicted by this procedure on any milk business, and the public would be much better protected than they would be if the medical officer of health had to wait for demonstration of injury of a very definite kind before proceeding to obtain information which should be in his possession at a much earlier stage.

POISONOUS NATURE OF ANIMAL EXHALATIONS.

THE exhalations from living and dead animal tissues are known to be deleterious to the health; the evils of overcrowding and bad ventilation being chiefly attributable to the devitalising influence of a contaminated atmosphere. Dr. Brown-Séquard has been studying very carefully the material substances on which depends the poisonous nature of prebreathed air. It has been known for a long time that, besides carbonic acid gas, the expired air contains small quantities of very powerful poisons, to which chiefly the unpleasantness of a stuffy atmosphere is due; the effect of the poison on the brain which is supplied with contaminated blood is to depress and even to pervert its activity. Dr. Brown-Séquard has devised an apparatus for condensing the vaporous part of the breath of animals, and he finds the liquid so obtained to be powerfully poisonous even when obtained from animals in a state of health. The liquid injected into the veins of sound animals produces much distress from the action of the poison on the nerves and brain. Moreover, the nervous apparatus of breathing is disturbed in its rhythm, the animal generally taking many fewer respirations than usual; the surface of the body grows cold, and the pulse-rate is quickened. Micro-organisms do not exist in expired breath, and, besides, the liquid remains after boiling as poisonous as before. It is quite probable that a man excretes from his lungs and skin in twenty-four hours more poison, though in a more diluted form, than a snake manufactures in the same time. Dr. Brown-Séquard also proves that this vitiated air is specially harmful to consumptive patients. Rabbits, which are notoriously prone to become consumptive, can throw off consumption or tuberculosis if the general health is maintained by proper food and fresh air, whilst their fellows succumb if placed in unhealthy surroundings.

PROVIDENT MEDICAL SERVICE.

THE annual meeting of the Metropolitan Provident Medical Association was held on the 28th of June, at the residence of Lady Trevelyan, Eaton-square. Lord Brassey presided, and referred to the fact that the Association was founded by the late Sir Charles Trevelyan. He defined the objects of the Association as being to provide, in return for small periodical payments, efficient medical treatment and medicine for the working classes and their families, and co-operation with the governing bodies of hospitals. Sir Edmund Currie did questionable service to the cause of provident dispensaries by urging the establishment of provident hospitals. This idea will not commend itself to the public. Hospital managers have enough on hand in providing beds for those who are overtaken with calamitous accident and sickness, without looking after the fairly well-to-do working man, who can secure ordinary medical attendance without the help of hospitals.

"PHARMACEUTICAL SPECIALTIES" IN BELGIUM.

THE Liège Medico-Chirurgical Society has addressed a communication to the Belgian Minister of the Interior on the subject of a Royal order referring to "pharmaceutical specialties," which was published in March, and which, though admirable as far as it goes, leaves, in the Society's opinion, considerable room for improvement. The order provides that pharmaceutical specialties must bear a label indicating the names of the substances comprised in them. The object of this being to prevent the pharmacist from selling medicines of the composition of which he is ignorant, it does not apply to specialties sold directly to patients (*malades*) by the pharmacist when he has made them up himself. This regulation the Liège Society suggests should be extended so as to include the obligation to affix not only a qualitative but a quantitative label, and also to compel all pharmacists, even those who have themselves made up the specialties, to conform to the rule. It is also hoped by the Society that the Government will see its way to a considerable amount of restriction on the pharmaceutical advertisements in political journals. The Society remarks that pharmaceutical specialties intended for prescription by medical men ought certainly to indicate the dose of each component for the prescriber's guidance. As to those intended for the indiscriminate use of the public, and which are supposed to cure nearly all diseases, the existence of these is objectionable; but if they are allowed at all the dosage should be clearly indicated. This might, perhaps,

operate as a caution to a purchaser, as it would suggest a doubt as to whether the dose was a proper one for his particular case. The exemption from the regulation of the pharmacist who has himself made up the medicine would seem to encourage pharmacists to take upon themselves the functions of medical men—a *rôle* they are only too apt, as it is, to play. This exemption ought certainly to be abolished.

COMPULSORY NOTIFICATION OF INFECTIOUS DISEASES: THE KINGSTON-ON-THAMES IMPROVEMENT BILL.

THIS Bill came before a committee of the House of Lords presided over by Lord Basing, on Thursday, the 5th inst., a clause providing for the notification of infectious diseases being opposed by the medical profession of that town. The clause is drafted on the lines of that known as the "Model Clause" recommended by the Special Sanitary and Police Committee of the House of Commons, and commonly known as the "dual system," which makes notification incumbent upon the medical attendant as well as the householder. Dr. North, medical officer of health, York, and Dr. Henry Tomkins, medical officer of health, Leicester, gave evidence showing that in both these towns a similar system had been in force since 1883 and 1879 respectively, without causing any unpleasantness or friction between either medical attendant and patient, or between the medical men and the health authority. On the other side, medical practitioners were called from Bolton and from Bury, whose evidence tended to show that in the former town the working of this Act was still strongly objected to by many of the local medical men; whilst in Bury, where the law laid the obligation *entirely* upon the medical attendant and left the householder free, it was considered an unjust arrangement. All the witnesses called in opposition admitted that they did not object to notifying voluntarily, but objected strongly to being *legally compelled* to do so, and, moreover, thought that this was a matter which ought to be provided for by imperial legislation, thus avoiding the creation of an invidious distinction between medical men residing in different parts of the country, or within a few yards possibly of each other, such as happens when one man resides within the boundaries of a town where these Acts are in force and another is just outside such boundary. The committee, after a very short deliberation, unanimously agreed that the Bill should proceed with the clauses unaltered.

"GASTROSCOPY."

THE following passage from Dr. Ewald's work, "Die Krankheiten des Magens" (Berlin: Hirschwald), which has just been published, will be read with interest in connexion with the suggestion made last week by Dr. Cole. After speaking of the various methods of physical diagnosis, he says: "Finally, we might employ a special means of examination introduced by Mikulicz—viz., the direct inspection of the gastric mucous membrane by means of a specially constructed gastroscope, to be termed *gastroscopy*. Unfortunately, with the name of this author the literature of this event is exhausted; for the gastroscope, as constructed by Leiter, is so costly and its application so difficult—an instrument requiring long practice by patient and doctor,—that it has not, as yet, been employed by anyone else. From a diagnostic point of view the results obtained by Mikulicz in carcinoma of the pylorus are interesting. In the normal stomach the pylorus appears as a long fissure, or as a triangular, oval, often circular, opening, which is surrounded by a zone of bright-red ridges and folds of mucous membrane, that are in active movement and exhibit all kinds of changes of shape. In neoplasms at the pylorus, this region, on the contrary, appears smooth, pale, without the above-mentioned ridges and folds, and in a state of complete rest, so that a good diagnostic criterion would be found herein, had not Pribram in one case of pyloric cancer (not examined gastroscopically) found marked movements of the tumour—i.e., an enlargement and diminution of it—synchronous with active contractions of the whole stomach."

THE LATE EMPEROR OF GERMANY.

IN the last number of the *Deuts. Med. Woch.* we are somewhat severely taken to task for some of the reports on the progress of the case of the late Emperor of Germany and for some of our criticisms thereon. We can only reply to these remarks by stating that the reports we published were received direct from an authoritative source, and that our criticisms could only be based upon them, as there were no other sources of information open to us. We shall be happy to give the same publicity to any other authentic statement of facts that may be submitted to us, and to criticise it with the same impartiality that we have all along endeavoured to maintain. But we may at once state that we have not the smallest sympathy with those who would endeavour to make this case a text for national glorification. There is no place for any international jealousies in scientific medicine, and the fact that two English physicians were called in to attend the late Emperor, in conjunction with several distinguished German physicians and surgeons, has in no way influenced our opinions.

TRANSPLANTATION OF THE CORNEA.

THIS operation has been frequently performed, but hitherto without permanent success. Various cases have been recorded by Mr. Power, Sellerbeck, and others, in which the new cornea taken from cat or dog, the eye of which is preferable to that of the rabbit, has formed adhesions and retained its transparency for some days or weeks, but sooner or later the new cornea becomes hazy, contracts to a button, and is finally absorbed or sloughs out, and the patient remains unimproved.

RESEARCH SCHOLARSHIPS OF THE GROCERS' COMPANY.

ON Monday and Tuesday next, July 9th and 10th, Dr. Woodhead, of Edinburgh, will deliver two lectures on Phthisis and Tuberculosis; in the first dealing with the general aspects of tuberculosis as studied at different ages, especially in children. Tabes mesenterica, and its relation to infection by the alimentary canal, will be considered, and then the relation of tabes mesenterica to other tubercular processes. The various forms of tuberculosis of the lung, and the modes of extension, will be treated of in the second lecture. The lectures will be illustrated with drawings and photographs, and also by means of a lantern, by which screen pictures of specimens will be projected.

PLEURISY IN INFANTS.

AN important paper upon two cases of pleurisy in newborn infants has recently been written by Dr. J. Vilcoq. (*Arch. de Tocologie*, vol. xv., No. 6.) The author draws attention to the comparative rarity of primary idiopathic pleurisy in infants; in both of his cases this condition was found after death, which occurred near the end of the first week. In each case the birth had been premature; in each the pleurisy was dry and fibrinous, and was most marked upon the diaphragmatic surface of the pleura. One case was complicated with pericarditis with effusion, and also with

melæna during the last three days. Dr. Vilcoq, in commenting upon his cases, suggests that they may possibly have resulted from the action of some infectious principle, since there were no indications of any primary affection of the lungs. He considers it probable that in the one case this principle simultaneously infected the pleura, pericardium, and intestine. Cultivation experiments are being conducted in support of this hypothesis. Meanwhile, the records are in themselves of considerable interest.

BRITISH COLUMBIA.

A CORRESPONDENT writes as follows:—"The Medical Council of British Columbia, at its last meeting in May of this year, decided to enforce the Act of the Provincial Legislature which renders it compulsory on every medical man wishing to practise in this province to obtain a licence from the Medical Council. In pursuance of this policy, a practitioner, who describes himself as coming from London, Eng., was on the 14th of June summoned before the police magistrate of Vancouver, British Columbia, charged with practising his profession in this province without having obtained the necessary licence. The Medical Council was represented by its solicitor, Mr. Walker, of Victoria, British Columbia, and the defendant was fined £5 and costs. There are a number of other cases of a similar nature which are to be proceeded with at once, as it is the intention of the Medical Council to prosecute vigorously all offenders against the Medical Act, 1886, and its amendments."

SELF-MEDICATION.

THE sad death of Mr. Edmund Gurney affords another illustration of the danger attending the employment of chloroform as a narcotic, a danger to which we very recently had occasion to refer in a similar case. Self-medication is at all times a most unsatisfactory employment, and yet with many individuals it is cultivated until it becomes a confirmed pernicious habit, in which the risks are gradually lost sight of in comparison with the temporary relief obtained. Even with purgatives the probability of increasing rectal congestion by the employment of aloes is sufficiently serious; but when insomnia is combated with continuous and increasing doses of chloral or chloroform danger to life becomes very real. It would be far better to lay bare all the circumstances of the case to an experienced physician, who would be able to ascertain the cause of the insomnia, and who could be trusted to prescribe judiciously and safely. It is very disquieting to learn from frequent sad records of fatalities that it is still perfectly possible to procure large quantities of active and dangerous remedies without a prescription.

PRECAUTIONS AGAINST THE SPREAD OF SMALL-POX IN LIVERPOOL.

AT the last meeting of the Liverpool Workhouse Committee the cases of small-pox occurring to a tramp and one of the tramp masters was the subject of discussion. A letter was read from Dr. Robertson (physician to the parish infirmary), from which it appeared that the disease in the tramp's case was of a very mild character, and only to be detected by minute observation. He suggested that for the present all tramps applying for admission to the casual wards should be subjected to medical examination, which should take place hourly from 7 P.M. till midnight. This, with all the other elaborate arrangements which have been made by the health authorities for the reporting and isolation of any cases of small-pox, would, he believed, prevent, as far as possible, any further spread of the disease.

CARELESS DISPENSING AND LEGISLATION.

THE recent lamentable case of death from a huge overdose of strychnia, dispensed by the son of a chemist, who had sadly misapprehended the intention of the prescriber, has been brought before the notice of the House of Commons. Sir Henry Roscoe asked the Vice-President of the Council if, in view of such an alarming accident, he could promise facilities for the consideration of the Pharmacy Bill, which is intended to give the Pharmaceutical Society more power to secure the fitness and intelligence of chemists. The Vice-President expressed his willingness, but was by no means reassuring as to his power to forward the wishes of Sir Henry Roscoe. We are of opinion that such measures should be considered by a committee of experts and others, and then presented to the House. With all its virtues Parliament cannot do justice to a question of this kind, which, however, is of vital importance.

FOREIGN UNIVERSITY INTELLIGENCE.

Algeria (Medical School).—M. Malosse of Montpellier has been appointed Professor of Chemistry.

Barcelona.—Dr. D. Pedro Bassagaña y Bonhome has been appointed Dean of the Faculty of Pharmacy.

Belgrade.—It is proposed to establish a Medical Faculty for Servia. There is in Belgrade a university containing all the faculties except that of medicine. Hitherto Servian medical students have been obliged to go abroad for their medical education, and they have usually gone to Paris or Vienna, the French and Austrian Doctorate of Medicine being recognised as qualifications for practice in Servia. Those who have gone to Germany and other foreign countries and have obtained doctorates from their respective universities have been obliged to pass an examination before a Government medical commission in Belgrade in order to obtain the right to practise.

Berlin.—Professor Preyer, Director of the Physiological Institute in Jena, has been invited to Berlin.

Freiburg.—Dr. von Kahlders has qualified as *privat docent* in pathological anatomy.

Greifswald.—The number of medical students has been for some time increasing, and the roll of clinical students for the current summer session shows the largest number on record—viz., over 200. It is satisfactory to learn that, notwithstanding the recent disastrous fire in the University Hospital, scarcely any interruption or interference with the clinical instruction has taken place.

Leipsic.—The University is fuller than ever, the total number of students being 3273, of whom 783 belong to the Medical Faculty.

Montpellier.—The Professorship of Anatomy is vacant.

Moscow.—Dr. Smolenski has been recognised as *privat docent* in Hygiene.

Nantes.—A chair of Clinical Ophthalmology has been created. To this Dr. Dianoux has been appointed.

Utrecht.—Dr. Engelmann, Professor of Comparative Physiology and Histology, has been appointed Professor of Physiology, in succession to Professor Donders, who has retired, Dr. Pekelharing taking Dr. Engelmann's post. Dr. Spronck has been appointed Professor of General Pathology and Pathological Anatomy.

THE sudden death from heart disease of Mr. Baker Greene is announced. Mr. Greene, after finishing his course of study at Trinity College, Dublin, joined the army as a surgeon in 1853, went through the Crimean campaign, and obtained the medal and clasps for Alma, Inkermann, and Sebastopol. He was subsequently called to the Bar, with a certificate of honour, in 1858. For the last thirty years he was engaged on the press, and was held in high esteem by his literary friends.

A CHOLERA scare last week in Messina has had the effect of stirring up the local hygienic authorities to that feverish activity which seems the normal condition in which sanitary ameliorations are begun, and never quite finished, in the Italian peninsula. Neglected *pozzi neri* and abominable water supply, in spite of recent choleraic explosions, had, it seems, to wait till a prominent citizen was seized with violent colic before the chief town of eastern Sicily awoke to the necessity of making its drains and its drinking water compatible with health.

FROM the report of the metropolitan water supply during the month of May by the water examiner appointed under the Metropolis Water Act, 1871, it appears that the reduction in the proportion of organic matter present in the Thames water which was observed in April was further continued during May, the absolute amount being in every sample small for river water. The water derived from the Lea also exhibited a corresponding diminution in the organic matter. All the samples were clear and bright.

MR. J. G. FITZGERALD, F.R.C.S. Ed., M.R.C.S. Eng., has been elected member of Parliament for the South Longford Division of the county of Longford, in the room of Mr. L. Connolly, who has accepted the Chiltern Hundreds.

MR. A. W. HARE, M.B., F.R.C.S.E., has been elected Professor of Surgery in the Owens College, Manchester, in place of Mr. Edward Lund, F.R.C.S., resigned.

WE regret to have to announce the death, on the 28th ult., of Dr. Milner Fothergill, at the age of forty-seven.

Pharmacology and Therapeutics.

SOLUBLE PODOPHYLLIN AND ACETANILIDE-MONOBROMO.

SOLUBLE podophyllin in scales (Messrs. Burgoyne, Burbidges, Cyrax, and Farries, of Coleman-street) is an elegant and useful preparation; it is soluble in water, proof spirit, or glycerine. We can recommend this preparation. The acetanilide-monobromo is another new preparation, which may be found of value in rheumatic, muscular, and arthritic pains. We have tried it in a case of facial neuralgia, and with some good effects.

TREATMENT OF MALIGNANT SCARLATINA.

Dr. A. SHARKHOVSKI, writing in the *Russkaya Meditsina*, strongly recommends hourly doses of salicylic acid or salicylate of soda in malignant scarlet fever, saying that since he adopted this treatment his mortality has been very greatly reduced, only three cases having proved fatal out of 125, all of them malignant, these three being cases where some other disease or bodily defect was present. The prescriptions which he gives are: Forty grains of salicylate of soda in six ounces of distilled water; a teaspoonful to a tablespoonful to be taken every hour according to the age of the patient. Or, better still, fifteen grains of salicylic acid in six ounces of hot distilled water and one ounce of syrup of orange. This does not deposit on cooling, and is not disagreeable, so that children take it readily.

STICKING-PLASTER TREATMENT OF ERYSIPELAS.

Professor Wölfler of Graz, remarking that Otto had met with considerable success in treating erysipelas on the plan recommended by Barwell and Freer—viz., the application of white-lead paint to the affected part, which they thought acted by keeping the air away from the erysipelas cocci and so prevented them from multiplying,—determined to carry out this principle of exclusion of air in a somewhat different and more effectual manner. The substance he used at first was linseed-oil varnish, but he found that not only was an impermeable coating necessary, but some degree of pressure as well. He then tried gutta-percha paper fastened to the skin with chloroform. This, however, was not entirely satisfactory, and so he turned his attention to something simpler—viz., strips of isinglass sticking-plaster about the breadth of the thumb. This proved exceedingly efficacious, the fever rapidly declining and the erysipelatous blush showing no disposition to spread.

DELICATE TEST FOR BISMUTH.

Mr. F. B. Stone recently showed a very delicate test for bismuth before the Society of Chemical Industry, which depends upon the fact that a strong solution of iodide of potassium produces a bright yellow colour when added to a very dilute solution of sulphate of bismuth, containing only a small quantity of free sulphuric acid. One part of bismuth in 1,000,000 parts will thus show a distinct colouration.

REPORT OF THE LANCET
Special Sanitary Commission
ON THE
SWEATING SYSTEM IN GLASGOW.

(Concluded from our last number.)

WHEN we commenced our inquiry into the sweating system as existing in different industrial centres, we anticipated that our descriptions would be short, that in the different towns much the same grievances would be brought forward, and that there would be no cause to dwell at any particular length on each centre of the sweating trade. Experience has proved that this impression was fallacious. Every centre has its special feature, and it is impossible to witness so much human suffering without dwelling at some length on the subject. In Glasgow the most notable and special feature of the sweating workshops is their proximity to degraded localities. We have now to describe one of them, which in itself is not particularly remarkable. It is in a court off a crowded street, frequented by a low class. The top floor of an old house in this court was occupied by a Jew sweater who has recently left, and his successor is, we believe, an Englishman. At the time of our visit there were only ten girls and two men working, and the room was not nearly full. We will not describe the dark rickety staircase and the dirty condition of this place, which was no worse than many other workshops we have visited, but would call special attention to the surroundings. For all the houses in this court, consisting, we are told, of eighteen separate tenements, there was but one closet. This is in a small side court, which is reached by groping under a stone staircase that blocks a passage going under one of the houses. In broad daylight this passage looks dark and threatening, and, with its winding stone stairs, seems more like the entrance to the dungeon of an old castle. The aperture beneath the staircase is just four feet high, and the under part of the stone steps is polished by the friction of people's backs as they pass through. The court beyond is only a little over six feet wide, and this space is in a great measure taken up by a huge and overflowing dust-bin. Dead and mangled rats lay on the dirty and moist flagstones. At the far end of this little inner court is the closet. When the door is shut it is perfectly dark within. There are two holes in the one seat, and under them two pails. We found no ashes, no disinfecting powder; nothing but soil and urine, fully exposed to the open air; the seats sopping wet, covered with filth; the ground in an equally revolting condition, and the smell so powerful as to make it difficult to remain long enough to note the condition of the place. Yet looking on to this yard, this well of poisonous stenches, was the window—fortunately closed—of a restaurant. Far worse, however, than the material horrors of this small inner court are its moral surroundings. The inhabitants of the eighteen tenements that frequent this one closet comprise several prostitutes, thieves, and drunkards. The tenements are brothels and places where spirits are sold when the public-houses are closed. On questioning the neighbours and the police on the beat, this court was

pointed out to us as one of the most dangerous rookeries of Glasgow. Here almost every night riots, fights, thefts, and drunken brawls occur. In this immediate neighbourhood, and in the morning, a murder of so brutal a character was committed that, though many years have elapsed since the deed was perpetrated, it is still well remembered by the inhabitants, particularly as the culprit was never caught. A young girl, the daughter of a fish dealer, was violated and murdered in the open air and in broad daylight, within a stone's throw of the place. A little before this a policeman was killed in the court next to that we are describing, and the quarter has so bad a reputation that the authorities glady assented to the pulling down of some of the houses. Yet in this villanous district and court, ten, sometimes twenty or thirty, young girls have to go to earn the scanty wages the sweater chooses to give them. The only sanitary accommodation existing they have to share with tenants of so low class a character that they are made to pay their rent nightly and in advance. In one of these tenements, consisting of two rooms, there were three men and three women living together. The rent charged is 8*d.* per day for a room and kitchen, and 6*d.* for a single room. The fire-grates in some instances have been destroyed, and the fire has to be lighted on the level. There had been fights and riots the three nights previous to our visit. The tailor's girls, as they go to work, are in danger of being insulted by the brawny and half-drunken women who listlessly stand about in the court, vying with each other in the use of obscene and violent language. To be over-worked, poor, half-starved in ill-ventilated, insufficiently lighted, over-crowded, over-heated, and badly drained workshops is evil enough; but to be compelled to work in the same courts, to pass under the same narrow, dark, low passages, rendered historical by the serious records above referred to, to be surrounded by vice which, in Glasgow, has reached the last expression of degradation and bestiality, is a danger, a humiliation, an insult against honest workers and against womankind at large, which should evoke the indignation and shame of the entire community.

At no great distance from this court we entered a house of, comparatively speaking, respectable appearance. On the first floor lived a Jew sweater, who on the day of our visit was employing four girls and four men to make a large number of military uniforms. They worked in his private apartment, and the closet was so placed that it could ventilate only through the bedrooms. We were taken to the kitchen and shown outside the window an iron grating which covered the roof of a little outhouse built in what had been a small inner court. This grating protected the roof and skylight, and was covered with garbage, domestic refuse, filth, and even fæcal matter, so that the smell prevented the opening of the kitchen window. All this, we were told, was thrown out by the tenants upstairs, who occupied an apartment where there was no closet whatever. Further, we were informed that these tenants kept a sort of brothel, and also sold drink on Sundays and after the closing of the public-houses. The Jew tailors complained very bitterly about their neighbours; and, what with the dirt outside their kitchen windows and the scenes stated to be going on upstairs, they were afraid to receive some of their customers.

In the next house we visited we found two Jew tailors occupying tenements of the same floor. Both denied that they employed hands or did any work at home, but from the general appearance of the place we must take the liberty of doubting this assertion. There were waterclosets, but evidently one of them was out of order, as the stench was very bad. From this house we went to a workshop, where as many as 600 garments have been made in a week, where thirty girls have been employed, and where, nevertheless, there was no sanitary accommodation whatever. The premises are now, we are glad to say, closed. Another Jew on whom we called had also removed. He had been engaged making entire suits for boys for the sum of 11*d.*! He employed ten or more persons, and has been known to turn out men's suits for 2*s.* Still another Jew, on whom we likewise called, had very recently changed his domicile, but this under compulsion of a somewhat energetic character. He employed some twenty persons, and they worked in a dirty apartment, with the plaster falling from the walls, and the boards innocent of soap and water; but the place caught fire. The workshop is therefore closed, and has at last been thoroughly purified, and this by the most heroic of disinfectants—a good conflagration. On the same landing there is another tailor's workshop, where suits are made to order, yet we found that the tailors had barely more than 180 cubic feet of space each to work in. On the landing there was one closet, well constructed and well placed, but dirty. This was not surprising, as it was the only accommodation available for ten different tenements. These comprised tailors, shirt makers, boot makers, and private families.

In Glasgow, as elsewhere, the order shops also want active sanitary superintendence. For instance, we visited the workshop of a high-class and one of the oldest established tailors in the town. The workshop was halfway below the level of the street, and so dark that gas has to be lighted during the day. This cellar is also damp, but there is an ingenious method of ventilation. A metallic pipe, drilled with small holes, passes along the ceiling and communicates with the stove, where the heat produces suction and draws off the atmosphere. In the same house there are more suitable premises upstairs, which, however, would entail a higher rent; and, to still further economise, this tailor gives out a part of his work to sweaters. Formerly he had about twenty-four men in his employ; now he has only ten or twelve good tailors in his service; yet the business has not decreased, but, on the contrary, increased. It is the sweaters, and not the properly qualified and properly paid journeyman tailors, who profit by this growing prosperity of their employer. The public, on the other hand, have no suspicion that a portion of the clothes they order at this shop is sent out to the places where the sweater employs unskilled labour.

There are several wholesale sweaters at Glasgow. One of these we found employing some fifty workers, for the most part girls, and they were nearly all engaged making soldiers' red coats. Here the closet was in the workshop, against the wall with no window, surrounded only by a few boards, and therefore ventilating in among the workers. Some of the tables were so crowded that the girls had to sit sideways when sewing. Close by, the brother of this Jew sweater had an equally large establishment. We then called on two Jewish families who work at home on a small scale. The first denied that they did any work where they lived, and the other that they lived where they worked. The latter occupied a small shop abutting on the street. A sort of bed had been made up of wooden cases covered over with dirty rags and bits of cloth. Here some unwashed children sprawled about in a state of semi-nudity. In the back part of the shop there was a bed, though hardly any other furniture. There was no closet, but the Jews stated they used the closet of a neighbour, who was a very cleanly milk dealer. The latter, however, indignantly denied that she ever allowed such dirty people to come near her closet, which was very clean and carefully locked. The milk-woman complained energetically of her neighbours, who, she said, instead of sleeping elsewhere, as they had stated, came in great numbers at night, slept on the floor and counters of the shop, made everything dirty, and over-crowded the place. That such careless, uncleanly people, with rags and dirt, should be next door to a milk-shop is a serious matter; and, while we felt sorry for the apparent poverty of these foreign Jews, the preservation of public health renders it necessary to compel them to provide better accommodation for their numerous family and friends.

Finally, we would describe the house of one or two poor Scotch home workers, and then we shall have given some idea of the tailoring trade in the central districts of Glasgow. Tailoring, of course, is not restricted to the centre of the town; but here sanitary difficulties are greatest in consequence of the overcrowding and want of space. The first Scotch home worker on whom we called was sewing in her kitchen. In one corner of the kitchen there was a bed, in the other a mangling machine. Some sort of dinner was on the fire. The place was hot and close, but nevertheless very clean. In the bedroom a sewing-machine stood next to the bed; and, though the bed was not made and the slops not emptied, tailoring work had already begun. In another tenement we found great misery. Some old women were sitting round a dirty kitchen table. There was a powerful odour of fish, and the furniture was so scanty that one person was working on the box used to collect ash and domestic refuse. The women, who were unwashed and unkempt, explained that formerly they earned enough to live with fair comfort, but now the Jews had beaten down the prices, and they were obliged to make waistcoats for 6*d.* each. They were themselves

dressed in soiled rags, and looked utterly wretched. A corner of a little bedroom was taken a year ago to construct a closet, which has an absurdly small opening on to the stairs, and is therefore very dark and insufficiently ventilated. In the bedroom thus reduced in size was placed a bed, a large chest of drawers, and a sewing-machine. The standing space remaining is barely four feet square, and yet here work is done, for the other and front rooms of this tenement are too dark.

If in such a place as this infectious disease broke out, there would be no means of isolating the patient, and the question arises whether the sanitary authorities would be informed in time to prevent contaminated clothing being delivered to the tailors who employ these poor workers. Dr. Russell, the medical officer of health, informed us that in the most important district of Glasgow there had been to his knowledge, from Jan. 1st this year to March 5th, no less than 1053 cases of infectious disease; out of this large number only forty-seven are described as having occurred among persons engaged in making clothes—tailors, dressmakers, milliners, &c. Twenty-five out of the forty-seven were cases of scarlet fever. Considering the mode of life of tailors &c., the proportion of those who belong to these trades, as compared to the total number of those known to be infected, is somewhat less than 5 per cent., and this seems very small. A much greater number must have suffered from infectious disease, but, as no compensation is offered, such disease is successfully concealed from the authorities. Yet the reputation of Dr. Russell as a medical officer of health is well established, and the inspectors in his service have given many proofs of energy and ability. The staff certainly should be increased, the principle of compensation applied, and a sense of responsibility spread throughout the whole trade. The revelations in regard to sweating will evidently impose new obligations on the Legislature and on public functionaries. The state of affairs in Glasgow clearly proves the necessity of such increased control. The condition of the sweating trade in the other towns, as described in the course of these reports, shows that in the provinces equally with London the need of reform is urgent. To understand and to appreciate this necessity should suffice to bring about a successful endeavour to cope with the evil and check its further development.

ASSOCIATION OF FELLOWS OF THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.

A GENERAL MEETING of the Members of this Association was held on Thursday last at the Inns of Court Hotel. The business of the meeting was to hear a general *résumé* of the work done by the Association, to receive the reports of committee meetings, and to consider the draft of the rules. The President of the Association (Mr. Pollock) occupied the chair, and there was a large number of Fellows present.

The Minutes of the last general meeting, which was held in Exeter Hall, having been read and confirmed,

The CHAIRMAN said that in the interval several meetings of the committee had taken place, and he thought that members would find that the executive had not been unmindful of the interests of the Association.

Mr. BRUCE CLARKE, hon. secretary, then read the report which was published in February last, and forwarded to every member of the Association.

Mr. SWAIN moved the adoption of the report. The method of voting at the Royal College of Surgeons would, he said, be materially altered by next year. Proxy voting would have come into use, and the circumstance would necessarily put a different complexion upon the Council. The plan of the Association was to organise during the current year, and so bring themselves into touch with all the Fellows of the College. With regard to the Association of Members, there was, in his opinion, a great deal of consideration due to Members of the College, and he would, under certain restrictions, be inclined to admit them to the franchise. The Council of the College had not the courage of its convictions, and it was an imperative duty on members of the Association to endeavour to secure the return to the Council of Fellows whose views were in harmony with the objects of the Association.

The report having been unanimously adopted, the Secretary read the list of proposed rules. They were all of a formal nature and similar to those which govern other associations of this kind.

Mr. TWEEDY proposed their adoption, and said that it was remarkable that although the Association had been in existence for some years, no rules had ever previously been drawn up. It was, he said, only reasonable that Fellows should have a voice in the affairs of the College, and it was not right that alterations should be made in its constitution without their consent being asked and obtained. The Council of the College had, however, made such alterations, and he instanced the amalgamation with the Royal College of Physicians and the expensive buildings on the Embankment and in Lincoln's-inn-fields as proof of his statement. The Fellows and Members had not been consulted in the matter. The Council of the College accepted the principle of the justice of the claim of the Fellows to recognition and a voice in the management of the affairs of the corporation, but in practice entirely ignored it. Further, no bye-law should be altered without the consent of the Fellows. When a Fellow was admitted he subscribed to the bye-laws, and it was not equitable that they should be altered without the consent of one of the contracting parties; but they were so altered, not only without their consent, but even without their knowledge. The bye-laws were, in his opinion, exceedingly far-reaching, and deserved the careful attention of the Association. Another important point which had of late somewhat passed out of view was that the Association was intended to interest itself in all matters relating to the social status of the Fellows, and a time might come when the rights and privileges of Fellows would have to be considered. The Royal College of Surgeons of Edinburgh formerly admitted candidates to the Fellowship without examination, and their Fellows did not then enter into competition for hospital appointments &c. with the Fellows of the English College. Now, however, it was different. An examination had been instituted, and Scotch Fellows might, perhaps, in the immediate future claim equality with their English *confrères*. In such a matter this Association would be interested. With regard to the assertion of Mr. Swain, that voting by proxy would in future be allowed at the College, he begged to correct the statement. Voting by proxy would not be allowed, but instead of the personal tender of the vote, as at present, the use of voting papers would be permitted.

Mr. TIMOTHY HOLMES seconded the adoption of the rules, and urged that the object of the Association should be kept prominently before the Fellows. He was not prepared with Mr. Swain to go with the Association of Members. Each Association ought in his opinion to work for itself, and the affairs of the Members were not subjects which necessarily concerned Fellows. The action of the Association would be to make the presidency of the Royal College of Surgeons a more useful, dignified, and important office in the future than it had been in the past, and the position of both Fellows and College would be strengthened.

Mr. SWAIN deprecated the imposition of any entrance fee, and after a short discussion, in which Mr. Tweedy and other Fellows joined, the entrance fee was abolished, and the annual subscription fixed at half-a-crown. With this modification the rules as submitted by the committee were adopted. A list of the executive officers for the coming year was then read out, Mr. Pollock being elected President, Messrs. Timothy Holmes and Swain Vice-Presidents, and Mr. Allingham Hon. Secretary. Votes of thanks to Mr. Bruce Clarke, Mr. Allingham, and Mr. Pollock, for their services during the past year, brought the proceedings to a close.

HOSPITAL SUNDAY COLLECTIONS.

THE following are among the principal amounts received at the Mansion House in aid of the Fund since our last issue:—

St. Paul's, Camden-square, £69 6*s.* 7*d.*; St. Andrew's, Ealing, £22 12*s.* 3*d.*; Christ Church, Chislehurst, £67; St. John's, Upper Holloway, and Mission, £30 0*s.* 6*d.*; St. Paul's Finchley, £36 0*s.* 6*d.*; St. Giles's, Cripplegate, £84 2*s.* 7*d.*; Royal Military Chapel, Wellington Barracks, £74 1*s.* 8*d.*; Beddington Parish Church, £26 2*s.* 10*d.*; "Delta" (tenth donation), £200; St. Stephen's, Shepherd's-bush, £20 2*s.* 3*d.*;

St. James's, Clerkenwell, £26 8s.; St. Peter's, Paddington, £38 6s. 9d.; Thomson Hankey, Esq., £20; All Saints', St. John's-wood, £105; St. John's, Paddington, £152 6s. 5d.; Chas. Hemery, Esq., £20; St. Alban's, Holborn, £20 17s. 10d.; St. Stephen's, Westbourne-park, £101 2s. 8d.; St. Thomas's Chapel of Ease, Westbourne-park, £60 12s.; Upper Norwood Congregational Church, £24 5s. 6d.; Trinity Presbyterian Church, Notting-hill, £42 11s.; Denmark-place Baptist Chapel, £20 9s. 6d.; Regent-square Presbyterian Church, £63 5s. 5d.; Church of the Immaculate Conception, Farm-street, £54 8s. 6d.; Streatham-hill Congregational Church, £35 8s. 1d.; St. John's-wood Presbyterian Church, £85; Blackheath Congregational Church, £114 3s. 10d.; St. John's-hill Wesleyan Church, Wandsworth, £24 1s. 6d.; North Finchley Congregational Church, £40; St. Peter's, Clerkenwell, £21 11s. 3d.; Holy Trinity, Upper Tooting, £41 15s.; New Jerusalem Church, Palace-gardens-terrace, Kensington, £27 13s.; Camden-road Baptist Church, £35 16s. 6d.; St. Barnabas', Pimlico, £40 9s. 10d.; Elstree Parish Church, £20 5s.; Christ Church, Mayfair, £125 16s. 8d.; St. Saviour's, South Hampstead, £24 10s. 6d.; Dartford Parish Church, £21 16s. The total sum realised up to Thursday evening last was £37,475.—N.B. Last year on same number of days' receipts the total was £37,000.

Public Health and Poor Law.

LOCAL GOVERNMENT DEPARTMENT.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

Brandon and Byshottles Urban District.—A general death-rate of 17·9 per 1000 prevailed in this district during 1887. Dairies and cowsheds are now placed under suitable regulations, and Mr. Blackett observes with satisfaction that parents are becoming more impressed with the importance of the sources of milk, and of boiling it or scalding it before giving it to their children; and he looks forward in consequence to a diminution in the mortality from infantile diarrhœa and other causes which in the young were so often "uncertified." A house-to-house inspection has been in progress; the cottage hospital is maintained in readiness, but apparently for small-pox only; and the district is declared to be in a fairly satisfactory condition.

Derby Urban District.—Mr. W. Iliffe has, in the main, a satisfactory report to present for 1887; indeed the general death-rate of 17·07 per 1000 is the lowest yet recorded. But underlying this there is an admission in the report that Derby, though outwardly clean, has in it a great amount of disgusting filth which can only be effectually removed from the midst of the population by means of a proper system of sewerage. The zymotic rate was 2·3 per 1000, and those causes of death which, under this heading, may be regarded as more or less associated with conditions of filth included 19 of enteric fever, 7 fatal attacks of diphtheria, and 65 of diarrhœa. Of enteric fever 105 cases came under notice, 64 occurring in the last quarter of the year, and in over 75 per cent. of the houses affected filth accumulations were found in proximity to them. The proportion of deaths to attacks was heavy—namely, 1 to 5·5. Twenty-seven cases of diphtheria were heard of. The cause of the epidemic was not obvious, but it is stated that there are frequently attacks of sore-throat in the town, and that in regard of a slight membranous deposit in the fauces the throat malady resembles diphtheria. The diarrhœal deaths were above the average of the previous nine years. Under the system of compulsory notification 812 certificates representing 1071 cases were heard of. With 64 cases of scarlet fever, 105 of enteric fever, 27 of diphtheria, and 874 of measles, it is stated that the borough infectious hospital was not utilised during the year, "but it was kept always ready in case of an emergency." The explanation of this extraordinary attitude must be that the hospital is not fit for current use; it is one of those so-called temporary structures which become permanent and almost entirely do away with the chance of securing isolation; indeed, it is described as "very much the worse for age and wear," and we hope no needless delay will take place in the erection of the new one which is in immediate contemplation. In dealing with the current work of nuisance removal, Mr. Iliffe more than once hints at the need for abolishing old privies of a disgusting type, and for a proper cleansing of the pails where pail-closets have been adopted.

Maidstone Urban District.—Estimating the present population of the borough to the best of his ability, Mr. Adams records a birth-rate for 1887 of 29·48 and a death-rate of 12·31 per 1000. Small-pox made its appearance in two houses; Maidstone being especially liable to occurrences of this disease, owing to the existence in the district of paper-mills, and the attendant sorting of rags. The excellent infectious hospital which has been provided continues to serve its intended purposes, and during the year twenty-five patients, nineteen of whom were suffering from scarlatina, were admitted into it. Disinfection work is still well carried out, and, as regards the form of stove, Mr. Adams thinks that, notwithstanding certain admitted advantages in the use of moist heat, the balance of advantage probably lies with the system of dry heat, as adopted in the borough. Serious pollution of well waters still exists, but there appear to be difficulties in inducing the water company to arrange for an alternative supply in one part of the district. Although work remains to be done before Maidstone can be regarded as beyond risk of disease due to preventable causes, Mr. Adams cannot but think that the small death-rate for 1887 was not due to mere chance, but was largely attributable to recent improvements in respect of drainage, water supply, isolation of infection, &c.

Bridlington Urban District.—The average death-rate from all causes during the past seven years has been 16·68 per 1000, and last year it was 16·84. The various causes of death are considered by Mr. Wetwan, the state of the district is referred to as regards vaccination, and some details are given as to sanitary inspection, but there is not much in the report as to the present sanitary circumstances of the district or of its existing needs.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN twenty-eight of the largest English towns 5290 births and 2864 deaths were registered during the week ending June 30th. The annual rate of mortality in these towns, which had been 16·2 and 15·5 per 1000 in the preceding two weeks, rose again last week to 15·9. During the thirteen weeks of the quarter ending Saturday, the 30th ult., the death-rate in these towns averaged 18·1 per 1000, and was 2·7 below the mean rate in the corresponding periods of the ten years 1878-87. The lowest rates in these towns last week were 10·4 in Brighton, 12·6 in Huddersfield, 13·8 in Bristol, and 14·2 in Birmingham. The rates in the other towns ranged upwards to 20·7 in Bolton, 21·2 in Manchester, 26·0 in Salford, and 27·8 in Preston. The deaths referred to the principal zymotic diseases, which had declined from 330 to 248 in the preceding six weeks, rose again last week to 304; they included 85 from whooping-cough, 73 from diarrhœa, 43 from scarlet fever, 34 from diphtheria, 32 from measles, 22 from "fever" (principally enteric), and 15 from small-pox. No death from any of these zymotic diseases was registered during the week in Birkenhead, whereas they caused the greatest mortality in Salford, Wolverhampton, and Preston. The greatest mortality from whooping-cough occurred in Cardiff, Halifax, Manchester, and Salford; from scarlet fever in Bolton and Cardiff; and from measles in Bradford. The 34 deaths from diphtheria included 28 in London and 3 in Leeds. Small-pox caused 11 deaths in Preston, 3 in Sheffield, and 1 in Hull, but not one in any of the twenty-four other large provincial towns or in London. The Metropolitan Asylum Hospitals contained only 2 small-pox patients at the end of last week. The number of scarlet-fever patients in the Metropolitan Asylum Hospitals and in the London Fever Hospital was 925 at the end of last week, against numbers declining from 928 to 895 on the preceding three Saturdays; 98 cases were admitted during the week, against numbers declining from 102 to 81 in the previous three weeks. The deaths referred to diseases of the respiratory organs in London, which had been 213 and 184 in the preceding two weeks, further fell last week to 156, and were 67 below the corrected average. The causes of 54, or 1·9 per cent., of the deaths in the twenty-eight towns last week were not certified either by a registered medical practitioner or by a coroner. All the causes of death were

duly certified in Brighton, Portsmouth, Norwich, Oldham, Leeds, Newcastle-on-Tyne, and in six other smaller towns. The largest proportions of uncertified deaths were registered in Liverpool, Sheffield, Hull, and Bristol.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been 20·0 and 18·4 in the preceding two weeks, further declined to 18·2 in the week ending June 30th; this rate exceeded, however, by 2·3 the mean rate during the same week in the twenty-eight large English towns. The rates in the Scotch towns ranged from 11·5 and 14·2 in Greenock and Dundee, to 20·8 and 21·6 in Perth and Glasgow. The 461 deaths in the eight towns showed a decline of 5 from the number in the previous week, and included 13 which were referred to measles, 12 to diarrhœa, 10 to whooping-cough, 6 to scarlet fever, 6 to "fever," 2 to diphtheria, and not one to small-pox; in all, 49 deaths resulted from these principal zymotic diseases, against 36 and 46 in the preceding two weeks. These 49 deaths were equal to an annual rate of 1·9 per 1000, which exceeded by 0·2 the mean rate last week from the same diseases in the twenty-eight English towns. The fatal cases of measles, which had been 13 and 12 in the previous two weeks, were 13 last week, of which 12 occurred in Glasgow. The 12 deaths from diarrhœa corresponded with the number in the preceding week, and included 5 in Glasgow and 3 in Paisley. The fatal cases of whooping-cough, which had been 5 and 9 in the previous two weeks, further rose to 10 last week, of which 7 occurred in Glasgow. The 6 deaths from scarlet fever corresponded with the number in the preceding week, and included 3 in Glasgow and 2 in Dundee. The 6 fatal cases of "fever" showed a further increase upon recent weekly numbers, and included 2 in Glasgow. The deaths referred to acute diseases of the respiratory organs in the eight towns, which had been 94 and 75 in the preceding two weeks, rose again last week to 89, and exceeded by 6 the number returned in the corresponding week of last year. The causes of 52, or nearly 12 per cent., of the deaths registered in the eight towns during the week were not certified.

HEALTH OF DUBLIN.

The rate of mortality in Dublin, which had been 24·7 and 20·7 per 1000 in the preceding two weeks, rose again to 24·8 in the week ending June 30th. During the thirteen weeks of the quarter ending on Saturday last the death-rate in the city averaged 24·6 per 1000, the mean rate during the same period being 16·9 in London and 19·0 in Edinburgh. The 168 deaths in Dublin showed an increase of 28 upon the number in the previous week; they included 4 which were referred to whooping-cough, 3 to "fever" (typhus, enteric, or ill-defined), 3 to diarrhœa, 2 to scarlet fever, 1 to measles, and not one either to small-pox or diphtheria; in all, 13 deaths resulted from these principal zymotic diseases, against numbers declining from 14 to 8 in the preceding four weeks. The annual death-rate from these zymotic diseases was equal to 1·9 per 1000, the rate from the same diseases being 1·7 in London and 0·8 in Edinburgh. The fatal cases of whooping-cough, which had declined from 11 to 4 in the preceding three weeks, were again 4 last week. The 2 deaths referred to scarlet fever also corresponded with the number in the previous week. The fatal cases of "fever" and of diarrhœa exceeded those recorded in recent weeks. The deaths of infants showed a slight increase, while those of elderly persons corresponded with the number in the preceding week. Five inquest cases, and 3 deaths from violence, were registered; and 52, or one-third, of the deaths occurred in public institutions. The causes of 22, or more than 13 per cent., of the deaths in the city were not certified.

THE SERVICES.

Mr. G. T. Hewlett, M.R.C.S., C.I.E., Deputy Surgeon-General, and Sanitary Commissioner, Bombay, retires from the Service on a pension of £950 a year. Mr. C. W. MacRury, F.R.C.S., S.Sc.C. Cantab., has been appointed to succeed him in the Sanitary Commissionership.

THE GREENWICH HOSPITAL PENSION.—The Greenwich Hospital pension of £100 a year for Inspectors-General of Hospitals and Fleets, vacant by the death of Peter Leonard, M.D., has been awarded to Inspector-General of Hospitals and Fleets William Macleod, M.D., C.B.

ARMY MEDICAL STAFF.—Surgeon-Major Horatio Scott, M.B., is granted retired pay (dated July 4th, 1888).

ARMY MEDICAL RESERVE OF OFFICERS.—Surgeon-Major Clement Cuthbert Walter, 2nd Brigade, Cinque Ports Division, Royal Artillery, to be Surgeon-Major, ranking as Major (dated July 4th, 1888); Acting Surgeon Richard Marsden Pilkington Low, M.B., 1st Middlesex Engineer Volunteer Corps, to be Surgeon, ranking as Captain (dated July 4th, 1888).—The following notification is substituted for that which appeared in the *Gazette* of June 19th, 1888:—Surgeon Robert Ross Brown to be Surgeon-Major, ranking as Major (dated June 20th, 1888).

MILITIA (Infantry).—4th Battalion, the Connaught Rangers: Surgeon A. O'Kelly Nolan, M.D., resigns his commission; also is permitted to retain his rank, and to wear the prescribed uniform on his retirement (dated July 4th, 1888).

MILITIA MEDICAL STAFF.—Surgeon-Major C. W. Marriott, M.D., 4th Battalion, the Royal Warwickshire Regiment, resigns his commission; also is permitted to retain his rank, and to wear the prescribed uniform on his retirement (dated July 4th, 1888).

ADMIRALTY.—The following appointments have been made:—Staff Surgeon Alfred T. Corrie, to the *Defiance* (lent), and Surgeon George L. Baker, to the *Ganges* (both dated July 4th, 1888).

ARTILLERY VOLUNTEERS.—1st Cheshire and Carnarvonshire: Acting Surgeon A. J. Jefferson, M.B., resigns his appointment (dated July 4th, 1888).

RIFLE VOLUNTEERS.—13th Middlesex: Surgeon J. G. Webb resigns his commission (dated July 4th, 1888).—4th (Eton College) Volunteer Battalion, the Oxfordshire Light Infantry: Acting Surgeon E. S. Norris, M.B., to be Surgeon (dated July 4th, 1888).

Correspondence.

"Audi alteram partem."

CONCURRENCE OF FEBRILE DISEASES IN THE SAME PATIENT.

To the Editors of THE LANCET.

SIRS,—In last week's "Mirror of Hospital Practice" Dr. S. Ringer reports a very interesting case of measles occurring during the course of typhoid fever in a patient under his care in December, 1887. I now send you notes of a case occurring during the same month, in which not only had the patient measles and fever concurrently, but a severe attack of diphtheria, followed by scarlatina and chicken-pox, all within the space of seven weeks.

During a very severe outbreak of fever in the neighbourhood of Kells, and when there were forty cases of fever under my care in the Kells Fever Hospital, K. B——, aged fourteen, was admitted on Dec. 10th, 1887, together with two brothers and three sisters, all suffering from a severe form of bilious fever, similar to the outbreak described by me in the paper I read at the meeting of the British Medical Association last August. She and one younger sister had been exposed to the contagion of measles five days before admission into hospital. On the 8th she was suddenly struck down with fever—a fever very similar to that described by Dr. Ringer, and with the points I so strongly dwelt upon in my former paper: sudden onset, great prostration, bowels constipated, motions pale and offensive, bright red tip to tongue, splenic enlargement, distended abdomen, no delirium, high temperature, and severe muscular pains. On the 18th a sudden crisis occurred; temperature normal. On the 20th she had an attack of modified or German measles, with the symptoms so well described by Dr. Tonge Smith, except that the temperature never rose above 99°. By the 26th this attack had passed away, leaving nothing but a few enlarged glands on both sides of the neck. Appetite fair; tongue clean. Bowels still costive; motions fetid. On the 28th she complained of sore throat. High fever. Gland

enormously enlarged; stony hardness. Both tonsils covered with diphtheritic membrane. The urine became albuminous, and the attack was so severe that for three days I looked on the case as hopeless. On Jan. 2nd there was slight improvement, which was steadily maintained until the 8th, when she had a severe attack of vomiting of greenish, bilious fluid, and next morning exhibited all the signs of a mild attack of scarlet fever—strawberry tongue, eruption, &c. By the 16th she was desquamating freely. On the 18th a papular eruption appeared, pushing off in the strangest manner the flakes of desquamating skin. This eruption became vesicular, and she had a mild attack of chicken-pox. By the 25th she was beginning to convalesce—a very tedious process. Naturally, after running the gauntlet of so many diseases, she remained anæmic and weak for eight weeks longer. One sister developed measles after the fever on Jan. 12th; the other sister, who was exposed to the contagion of measles at the same time as K. B—— and remained in the same ward, escaped altogether; the youngest sister, aged five, had a mild attack of scarlatina when convalescent, followed by an enormous axillary abscess.

Now, I ask, was all this conglomeration of diseases only different phases of one continuous blood poisoning, nature's endeavours to expel the poison resulting in violent storms, each storm being attended with the group of symptoms that we are accustomed to describe as different diseases? Or did the germs of five different diseases live harmoniously and flourish synchronously in the blood of this sorely-tried patient, feeding on the same diet and avoiding internecine warfare? Or did each attack, contrary to usual experience, leave in her system for food the germs of each successive disease during the last six months? I have treated several cases of fever followed by either measles or scarlatina before the patients have really become convalescent.

Treatment in this case consisted in the free administration of stimulants and nourishment, alternate doses of iron and bichloride of mercury—a mode of treatment I have found most successful in many of the exanthemata, and one strongly sanctioned by Dr. Illingworth. Locally I applied equal parts of glycerine and strong solution of perchloride of iron to the diphtheritic membrane.

I am, Sirs, yours faithfully,

JOHN RINGWOOD,

June 30th, 1888. Medical Officer, Kells Fever Hospital, Ireland.

WEIL'S DISEASE.

To the Editors of THE LANCET.

SIRS,—The annotation in your last issue on the peculiar type of jaundice described by Weil induces me to lay before your readers a short account of a case which occurred in my practice last summer, which then puzzled me considerably, but which, in the light of your note, I am inclined now to set down as a case of Weil's disease.

The patient, a healthy man of twenty-five, a dock labourer, was admitted into the Liverpool Northern Hospital on Aug. 23rd, 1887, deeply jaundiced. There was a history of exposure to wet fourteen days before, and the jaundice had come on two days before admission. No other cause for the jaundice could be found, except the fact that the patient was a heavy drinker, and the case was put down as one of catarrhal jaundice. The temperature was normal. On the following day the temperature rose to 101·2°, and the patient became much worse. He began to complain of severe headache and of photophobia; there was distressing sickness; and the urine passed during the day was only four ounces, sp. gr. 1012, and containing a large quantity of bile, a little albumen, and some renal casts. These symptoms continued unabated, the next day the patient getting very prostrated. In the evening (Aug. 25th) the patient had a severe attack of epistaxis, which was only stopped by plugging the nostrils with perchloride of iron. The temperature fell to 100°. The urine still continued scanty—viz., only six ounces in the twenty-four hours. On the following morning the patient was much exhausted by the loss of blood, and his temperature had fallen to 98·4°, sinking still lower to 98° in the evening. Early in the morning of the 27th there was another attack of epistaxis, even more severe than the first. This was followed by violent diarrhœa and rectal tenesmus, the bowels acting involuntarily every fifteen minutes. This reduced the temperature to 97°, at which it remained during the day. The photophobia was still severe in the morning, but towards night the patient sank into a condition of stupor. The jaundice continued unchanged, and there was flatulent distension of the abdomen, masking almost completely the liver dulness. The patient passed thirty ounces of urine during the day, after turpentine stupes had been applied to the loins. His condition became very much worse during the night, and he died at 4 A.M. on the 28th, his temperature just before death being 98·4°.

Whether this case was simply one of catarrhal jaundice, death resulting from asthenia caused by epistaxis and dysenteric diarrhœa; whether it was a case of malignant jaundice, causing death before the liver had time to atrophy; or whether the fatal issue was due to uræmia associated with jaundice, does not seem clear. The post-mortem appearances were, however, noticeable, and seemed to lend some colour to the idea that the link between the various symptoms in this case was to be found in the presence of the specific virus, which Fiedler supposes to be characteristic of Weil's disease. The liver was enlarged, and weighed sixty-four ounces. There was no jaundice of the liver substance, the bile-ducts contained no bile, and the gall-bladder was empty and collapsed. The kidneys were swollen and congested, averaging eleven ounces in weight. On microscopical examination, the cells of the liver were swollen and granular, presenting rather the appearance of cloudy swelling, and there was some increase of connective tissue between them. The kidneys were manifestly inflamed. The epithelial cells were granular, and many of the tubules were filled with exudation, which was mostly translucent, but in some tubules was pigmented, having a dark, granular aspect. The spleen was small, weighing only an ounce and a half. No abnormal appearance was noted in the mucous membrane of the intestines. The brain was healthy.

This case differs of course in some important respects from some other recorded cases of Weil's disease; notably in the severe and repeated epistaxis, in the absence (as far as noticed) of severe muscular pains, in the fatal issue, and in the shrunken appearance of the spleen after death. Still, I cannot but think that there are very many and striking points of resemblance, and that the coexistence of the intense jaundice, the nephritis and uræmic symptoms, the severe headache and photophobia, occurring in the case of a young healthy man, twenty-five years of age, in the middle of a hot summer, accompanied by some amount of fever and marked gastric disturbance, and coming on suddenly after a chill, indicates pretty clearly that some toxic agency was at work. The post-mortem appearances were certainly not very striking, but at any rate they resembled with some closeness those which have been noted by other observers in cases of Weil's disease.

I am, Sirs, yours faithfully,

W. PERMEWAN, M.B. Lond.,

July, 1888. Senior House-Surgeon, Liverpool Northern Hospital.

MANCHESTER.

(From our own Correspondent.)

INCORPORATION OF ADJOINING TOWNSHIPS.

WE have just now considerable agitation going on concerning the desirability, or otherwise, of certain of the adjoining townships being amalgamated with the city. Crumpsall, Moss-side, and Newton-heath are the three which it is now proposed to add to Manchester. The most important factor concerned in this agitation is the question of sewage disposal, which in each of these districts appears to be a problem which can only be satisfactorily solved with the help of Manchester proper. To all intents and purposes these outlying suburbs are part of Manchester, and have a community of interest with it.

HIGH DEATH-RATE OF THE CITY.

One result of the recent conference, called to consider our high mortality, has been the formation of a "Working Men's Sanitary Reform Association," by which it is hoped the working classes may be led to take a more practical interest in a matter which so largely and so closely concerns them, and to help as far as they themselves can in measures to diminish it. One of the greatest bars to much diminution

is undoubtedly the large amount of wretched cottage property that exists, and preliminary steps have been taken for the formation of a company with a philanthropic purpose, but which, it is hoped, may also prove financially a success, whose aim will be to provide healthy cottage homes at a rate within the means of the ordinary labourer and artisan. The Sanitary Association have petitioned the Home Secretary to take some steps to provide more effective control over the practice of insuring the lives of young children, as they are convinced that this insurance of infants, in many cases, tends to carelessness and neglect on the part of mothers and others. The same Association has also petitioned Mr. Ritchie to provide in his Local Government Bill for the appointment of medical officers of health by the County Councils, and not by the smaller district ones, and that more "security of tenure" should be provided for those officials than at present exists.

OWENS COLLEGE.

At the annual prize day and presentation of associates it was reported by the principal that twelve graduates had, on the recommendation of the Senate, been elected to the Associateship. The Platt Physiological Scholarship was declared awarded to Mr. G. H. Cooke, and the Turner Medical Scholarship to Mr. J. E. Platt. The total number of students during the past session had been 1269. Allusion was also made to the large growth of the medical faculty, and the probable need in the near future of enlargement in this department.

HOSPITALS.

By the munificence of the trustees of the late Sir Joseph Whitworth, whose liberality towards Owens College has been on a magnificent scale, a new cottage hospital is about to be erected between Darley Dale and Matlock Bridge, this district having hitherto been unprovided with any hospital accommodation within a convenient distance. Considerable enlargements will shortly be made at the Ancoats Hospital, which for many years has been doing much good work in a quiet way in a very crowded part of the city, and for a long time, with very limited funds. The present scheme when completed will provide for seventy-two beds.

UNWHOLESOME FOOD.

A scandalous case of dealing in meat unfit for human food was lately exposed in the police-court at Salford. A butcher was fined £10 and costs for having in his shop ready for sale not only mutton and pork, but also horse-flesh, all in a diseased condition and unfit for consumption. The authorities are active, too, in prosecuting offending milk dealers, scarcely a week passing without someone being before the magistrates for tampering with this important article of food.

SMALL-POX.

Small-pox here has almost subsided, only some two or three cases per week having been met with during the past month. Since the beginning of the year 270 cases have been received into the small-pox hospital belonging to the infirmary, which practically receives all the small-pox of the district. It is worthy of note that not one case has been received from amongst the large Jewish population here, the bulk of whom are of the very poorest, and contribute many hundreds of scarlet fever patients to the hospital. This is believed to be due to the fact that the Jewish infantile population are most thoroughly vaccinated and the adults largely revaccinated, this being brought about by a rule of the Jewish board of guardians not to grant relief to any family whose children are unvaccinated or its adults not revaccinated.

Manchester, July 4th.

NORTHERN COUNTIES NOTES.

(From our own Correspondent.)

NEWCASTLE ROYAL INFIRMARY.

SINCE the abolition of the letter system and the development of the Newcastle Royal Infirmary into a free hospital, it appears, as it were, to stand on a wider and more popular base, and consequently more interest is being taken in its support by our citizens of all classes. Last week an influential meeting of ladies was held at the request of the Mayor, and for the first time in its history an auxiliary ladies' committee was formed, a step which cannot fail to have a good effect on the fortunes of the institution. A praiseworthy and successful effort was also made to augment the funds by a performance of the "Garrick" Amateur Dramatic Club, given in the Theatre Royal in this city on last Friday evening. The house might be said to be full in every part. The efforts of the ladies and gentlemen who exerted themselves on the occasion called forth repeated rounds of well-merited applause from the audience. A comedietta, by a member of the club, entitled, "A Mean Advantage," was anything but an ephemeral production, although written for the occasion, for, as well as possessing humorous points in abundance and laughable situations, its literary excellence and dramatic qualities will cause it to be called for again. I have been told that the performance is likely to realise a very handsome sum. Mr. Page has lately operated on a girl in the infirmary for hydronephrosis. The whole kidney was removed, and the patient lived ten days. I believe that this is the first time this operation has been performed in the north of England.

AMBULANCE WORK IN THE COUNTY OF DURHAM.

Surgeon-Major Hutton has been inspecting a number of colliery hands who have been instructed in ambulance work by Dr. Branskill of Coxhoe. Surgeon-Major Hutton addressed the men at the close of the inspection, and said they had gone through the practice in a most creditable manner, and reflected credit on their kind instructor, Dr. Branskill, and themselves; and also remarked that he had always taken a great interest in the Volunteer movement, not only as a strong arm of defence, but as developing the physique of our great industrial classes.—Mr. Sutherland, surgeon, has received a silver teapot in recognition of his services as instructor to the South Shields and River Tyne police ambulance classes. Mr. Sutherland, in the course of a reply to a vote of thanks, mentioned that close upon 3000 policemen in the northern counties now held certificates of the St. John Ambulance Association.

HEXHAM.

The people of Hexham had a jubilation last week, and not without a cause, as they had succeeded in getting a Bill giving a better supply of water to the town through committee in the House of Lords. The ancient abbey town of Hexham has much historical interest in itself to invite visitors, and, with the picturesque attractions of its vicinity and its sheltered situation, it must be of great value in some seasons to invalids. Now that the water supply will be pure and abundant, the popularity of Hexham and its claims to medical recognition as a health resort are certain to increase.

SMALL-POX IN DURHAM COUNTY.

Dr. W. T. Bolton of Ebchester reported to the Lanchester sanitary authority that he had seven cases of small-pox in the village of Allendale Cottages during the month ending June 23rd. The Government inspector requested that everything possible should be done to prevent the spread of the disease.

Newcastle-on-Tyne, July 4th.

DUBLIN.

(From our own Correspondent.)

THE EPIDEMIC OF MEASLES AT SKIBBEREEN.

THE epidemic of measles at Skibbereen and at Cape Clear has been greatly exaggerated, and on Saturday last Dr. Jennings, medical officer of Skibbereen Workhouse, stated there was but one case in the house, which was now convalescent. As regards the numerous deaths said to have taken place on Cape Clear Island, and the prevalence of measles of a most malignant kind, Dr. Hadden, the medical officer of the district, visited the island on June 25th, and states that he found only one case of measles, that of a child, who is now recovered. Certainly five deaths have taken place on Cape Clear Island within the past few weeks, but there is no proof that they succumbed from measles or its complications.

THE MEATH HOSPITAL, DUBLIN.

I am informed that Mr. Wharton, one of the surgical staff, has sent in his resignation, and it is rumoured that

the vacancy will be filled up by the election of a leading member of the profession in Dublin, who formerly was attached to the hospital. Mr. Wharton has been connected with the Meath Hospital since 1858, a period of nearly thirty years, and leaves the hospital with the esteem and regard of the colleagues with whom he has been associated for so many years.

POISONING BY OPIUM.

A gentleman aged thirty was found lying in an unconscious state last week by the police and removed to the Meath Hospital. He had poisoned himself with laudanum, and died shortly after admission notwithstanding all treatment. The deceased had swallowed four ounces of tincture of opium, an amount equivalent to one hundred and thirty-two grains of the drug.

It is rumoured that Mr. Colles, Surgeon to Her Majesty in Ireland, has resigned the surgeoncy of the Richmond Hospital.

Dublin, July 3rd.

PARIS.

(From our own Correspondent.)

ALCOHOLISM.

AN extra Parliamentary Commission has been held, under the presidency of M. Léon Say, to investigate the question of alcohols, and the following are the conclusions of the report drawn up so far as hygiene is concerned: "The cause of alcoholism resides as well in the quality of alcohol consumed as in the quality. In order to restrict its consumption, the tax thereon should be augmented and the number of public-houses diminished; but the tax cannot be increased without at the same time undertaking energetic measures in view of the repression of fraud. As regards the quality of alcohols, it is necessary to distinguish the alcohols of industry and those of brandies (*eaux-de-vie*). A maximum of impurity may be tolerated in the alcohols of industry, but those for consumption should be as pure as it is possible to have them, and any infringement in this direction will be severely punished."

THE BACILLUS OF FOWL CHOLERA FOUND IN DUCKS.

An epidemic lately broke out among the ducks of the Jardin d'Acclimatation, when more than eighty of them succumbed in a few days. Professor Cornil, after having established that the alimentation was the source of the malady, searched for and cultivated the pathogenic microbe. He found in the blood of the ducks which died a very small bacillus, the culture of which on gelatine is identical with that of the microbe of the cholera of fowls described by M. Pasteur. The anatomical lesions are also the same as the alterations produced by this microbe; and yet, observes M. Cornil, this malady of the ducks is not at all the cholera of fowls, as the bacillus inoculated kills only ducks. It is inoffensive for fowls, pigeons, and rabbits, which, on the contrary, rapidly succumb after the inoculation of the choleraic microbe.

TREPHINING.

At a recent meeting of the Academy of Sciences, Professor Verneuil read a very interesting paper for Dr. Lucas-Championnière on the innocuousness of the operation of trephining. The author recalled that this operation is frequently performed by the Kabyles in medical cases, and that they consider it very harmless. Encouraged by the researches of Broca and Charcot on cerebral localisation, which furnished valuable data and indications for the application of a crown of the trephine on certain parts of the skull, with the view of obtaining the cure of traumatism or of any morbid accident, he performed the operation in five cases of traumatism and in fifteen for medical affections. Of the five surgical cases (fracture of the arch of the skull), three were attended with success. The two unsuccessful cases were due to the gravity of the injuries. One of these died twenty-four hours after the operation; in this case, however, the post-mortem revealed a focus of suppuration, and a quantity of pus around the brain. The other fifteen cases were trephined for divers medical affections: six for cephalalgia, attended with vertigo (three cures); four for epilepsy, with improvement; one for incomplete syphilitic hemiplegia. The recovery took place in four days. There was only one case in which the patient felt a little pain for some time after the operation. The cephalo-rachidian liquid was observed to be more abundant in the epileptics than in the other subjects trephined. Once a large arachnoidian vein was opened, and at another time the superior longitudinal sinus. Hæmostasis was obtained by plugging the opening made by the trephine with catgut. This latter was easily reabsorbed. Dr. Lucas-Championnière employs a trephine of three centimetres in diameter. The results of the trephining were remarkable. When there is no suppuration the cicatrix is resistant even so hard that after a certain time the pulsations of the brain are not felt. It is not necessary to wear a protective apparatus. The operation may be performed at all ages, except, perhaps, in extreme old age. Youth, however, is the most favourable period for it. In no case except one was there any fever or suppuration, not even in a case where Dr. Lucas-Championnière removed a piece of the skull measuring eight centimetres in its largest diameter and three centimetres in its smallest.

AGE-STATISTICS OF PARISIANS.

The following curious statistics have just been published by the Prefecture of the Seine. Paris counts 6386 persons who are more than eighty years of age, 2247 vary between eighty-five and eighty-nine, 640 have passed ninety years, and 138 are more than ninety-five years old. There are 20 centenarians: 4 bachelors, 1 married man, 6 widowers, 1 unmarried woman, 1 married, and 7 widows. The population of Paris amounts to 2,260,945.

New hospitals in different quarters of Paris are to be erected by private initiative, and will be under the direction of the sisters who have been expelled from the public institutions.

Dr. Paul Loye, tutor in Forensic Medicine at the Paris Faculty of Medicine, is charged with a mission to study the organisation of the teaching of that branch in Germany and in Austria.

Dr. Raymond, *agrégé* of the Faculty of Paris, is commissioned to proceed to Russia for the purpose of studying in its universities the questions of medical teaching relative to diseases of the nervous system.

Paris, July 3rd.

THE COLLEGE ELECTION.

THE voting at the above election, which took place in the Library of the College of Surgeons of England on the afternoon of Thursday, the 5th inst., resulted as follows:—

Mr. WILLIAM CADGE ...	116,	including	9	plumpers
Mr. THOS. BRYANT ...	106	,,	3	,,
Mr. T. PICKERING PICK	93	,,	18	,,
Mr. John Couper...	65	,,	4	,,
Mr. Arthur Trehern Norton	56	,,	5	,,

Mr. William Cadge of Norwich, and Mr. Thomas Bryant, were therefore declared by the President to be duly re-elected, and Mr. T. Pickering Pick to be elected to the vacancy caused by the resignation of Sir Joseph Lister. No papers were declared invalid.

The interest in the election was even less than that taken in the election of last year, only 180 Fellows voting, against 199 in 1887.

There was the usual interesting exhibition of pathological specimens, and of the additions to the department of Comparative Anatomy.

THE MARGARINE ACT.—In the Report of the Cheshire County Analyst (Mr. J. Carter Bell) it is remarked that "the Margarine Act had had a most remarkable effect upon the adulteration of butter, for out of fifty-one samples only one was adulterated, and this came from the Hyde division. It would be well if a similar Act could be passed with regard to lard, the adulteration of which had now reached alarming proportions, for more than fifty per cent. of the lard samples were adulterated with cotton-seed oil."

Obituary.

ISAAC HARRINSON, F.R.C.S.

THE borough of Reading has sustained a great loss in the death of Mr. Harrinson, who was in active practice in Reading for over fifty years. He took a chill and died from pneumonia. Mr. Harrinson's professional career was exceptional, and well worthy of record for the example it affords that the greatest success is attainable in private practice among the educated and refined class of a district without the aid and publicity which a hospital or other appointment is supposed to give. The whole of Mr. Harrinson's energies were given to private practice, in which he succeeded to such an extent as to command the greatest confidence of his patients and the highest respect among his professional brethren in the neighbourhood. He might, indeed, be said to have been for many years the popular family doctor of the better class of the inhabitants of Reading. He was quiet in manner, unobtrusive, and guarded in speech, precise in professional knowledge, and singularly exact in its application. His success enabled him to realise a large income, which he used most liberally for the good of the poor and others of the parish of St. Mary, in which he resided, giving for public purposes sums, not in hundreds of pounds, but in thousands. By his liberality the almshouses were restored, and £1000 was given to the rebuilding of the Town Hall. A new side aisle was added to St. Mary's Church at his expense for the comfort of the poor. Old and dilapidated buildings were bought and razed to the ground at his cost to give more open space to a poor district, and to afford a better approach to and view of the church of St. Mary, for which he seemed never able to do enough, and at which he was a regular attendant, notwithstanding the calls of his extensive practice. He was singularly reliant on his own judgment, basing it at all times as he did on careful thoughtfulness and that higher guidance which he at all times sought and trusted in the acts of daily life, which was uniformly one of unostentatious piety. Like others of the elder generation of practitioners in Reading, he seldom left home for a holiday, for he found recreation sufficient in his professional studies, in his home, and in the interest he took in all around him. Mr. Harrinson might be instanced as an example of Wordsworth's beautiful lines :—

> "Type of the wise who soar, but never roam,
> True to the kindred points of heaven and home."

He was one of the founders of the Reading Pathological Society, of which he was first annual president. He established a social and ethical club called the "Aston Key Club," the members of which dine at each other's houses in succession, to promote good feeling and to encourage the preservation of a high professional tone. It was a great satisfaction to him to see this club well sustained during the last year of his life, and to have met as guests distinguished men from London. Though his funeral took place in the forenoon of a busy market day, the church was filled by his fellow-townsmen and a large number of the profession, who assembled to pay this last respect to the remains of one whom in life they had loved so well. The full choir of St. Mary's Church, accompanied by the organ, which was there largely through Mr. Harrinson's liberality, and which is justly celebrated for its excellence, made the service deeply impressive by the rendering of the music to the beautiful and specially suitable hymn, with which the service terminated, in the appropriate words—

> "Father, in Thy gracious keeping
> Leave we now Thy servant sleeping. Amen."

THE RABBIT PEST IN AUSTRALIA.—A Royal Commission has been appointed in Sydney to inquire "as to whether the introduction of disease amongst rabbits by inoculation or otherwise, or the propagation of disease natural to rabbits, for the purpose of promoting their destruction, would be accompanied by danger to human or animal life." The terms of the inquiry, as officially expressed are certainly open to criticism.

Medical News.

UNIVERSITY OF CAMBRIDGE.—At the third examination for the degree of M.B. the following gentlemen were approved :—

PART 1.—Ds. Battersby, Trin.; Ds. Blaker, H. Cav.; Ds. Bowen, King's; Ds. Campbell, H. Cav.; Ds. Chaplin, Joh.; Ds. Colbeck (E. H.), Caius; Mag. Courtney, Pemb.; Ds. Crisp, Caius; Ds. Elsmore, Christ's; Ds. Foster, Trin.; Ds. Gervis, Trin.; Ds. Goddard, Caius; Ds. Gordon, Trin.; Ds. Hawkins, Caius; Ds. Hopkinson, Emman.; Ds. Lloyd (G. T.), Joh.; Ds. Murray, Trin.; Ds. Musson, King's; Ds. Ogilvie, King's; Ds. Roberts (R. J.); Ds. Rutherford, Sidney; Ds. Saunders (G. R.), Caius; Ds. Sortain, Caius; Ds. Syfret (S. R.), Trin. H.; Ds. Veale, Christ's; Ds. Weber, Trin.; Ds. Wickham (G. H.), Caius.
PART 2.—Ds. Barber, Cath.; Ds. Copeland (W. H. L.), King's; Ds. Harris (H. E.), Christ's; Ds. Hicks, H. Cav.; Ds. King, H. Cav.; Little, Down.; Ds. Percival, Trin.; Pollock (W. R.), Trin.; Ds. Prowse; Ds. Smithson, Christ's; Ds. Watts (A. T. G.), Corpus.

At the examination for the degree of B.C. the following gentlemen were approved :—

Ds. Beddoes, Pemb.; Ds. Whishaw, H. Cav.

UNIVERSITY OF DUBLIN.—At a meeting of the Senate held last week the following degrees were conferred :

Bachelor in Medicine.—Henry Cooke Drury, Henry Nason Dunn, Charles Fitzmaurice Harkin, James William Henry Jellett, Vernon Lanphier Jones, Joseph George Auriol Kane, Edward Kingsbury, Malcolm Charles Moore, Francis Bernard Nowlan, Herbert Holmes Orr, John Alfred Scott, Alfred Arnold Sproule, William George Theaker Story, and William M. Wilson.
Bachelor in Surgery.—Henry Cooke Drury, Henry Nason Dunn, Charles Fitzmaurice Harkin, Robert Warren Herrick, James Wm. Jellett, Vernon L. Jones, Joseph George Auriol Kane, Edward Kingsbury, Malcolm Charles Moore, Francis Bernard Nowlan, Herbert Holmes Orr, Alfred Arnold Sproule, William George Story, and William Macneily Wilson.
Master in Surgery.—Henry Moore Brabazon *(stip. cond.)*
Bachelor in Obstetrics.—Henry C. Drury, Henry N. Dunn, Charles M. Harkin, James Wm. Jellett, Vernon L. Jones, James Joseph Auriol Kane, Walter Kiddle, Edward Kingsbury, Malcolm Charles Moore, Francis B. Nowlan, Herbert Holmes Orr, Alfred Arnold Sproule, William George Story, and Wm. Macneily Wilson.
Doctor in Medicine.—Henry Moore Brabazon, Thomas Gordon Kelly, and Thomas Leahy.

ROYAL COLLEGE OF SURGEONS IN IRELAND.—At meetings of the Court of Examiners, held last week, the following was admitted a Fellow of the College :—

Henry Michael O'Hara, of Melbourne.

SUPERANNUATION. — Mr. Charles Holtom, late medical officer, Fenton District, Stoke-upon-Trent Union, has been granted an allowance of £15 per annum.

ROYAL BERKSHIRE HOSPITAL.—Mr. Martin Hope Sutton has sent a donation of £100 to the funds of this hospital, in prospect of the Hospital Saturday collections made at Reading on Saturday last.

A MEDICAL BARRISTER.—Dr. Cooper Rose of Hampstead was called to the Bar at the Middle Temple on June 13th, but he does not, we understand, intend to relinquish his medical practice.

WHITWORTH MEMORIAL HOSPITAL, MATLOCK.—The executors of the late Sir Joseph Whitworth, of Stancliffe Hall, have decided to erect a cottage hospital on a plot of ground situated on the high road between Darley Dale and Matlock Bridge.

A NEW INFECTIOUS HOSPITAL, WILTS.—At the Wilts Quarter Sessions, held on the 3rd inst. at Warminster, the Court approved of the erection and furnishing, at the County Asylum, of a detached hospital for infectious cases, at a cost not exceeding £2100.

SANITARY INSTITUTE OF GREAT BRITAIN. — At the anniversary meeting of the Institute, to be held on Thursday, July 12th, at 3 P.M., an address will be delivered by Dr. B. W. Richardson, LL.D., F.R.S., entitled "The Storage of Life as a Sanitary Study."

THE NEW CROMER COTTAGE HOSPITAL.—The opening of this new building took place on Saturday last, when, at a meeting of the committee, its formal presentation to the trustees was made by the donor, Mr. G. W. Collison of Cromer, who, entirely at his own expense, has given to the parish this commodious, substantial hospital. It contains on the ground floor convalescent and accident wards, consulting-room, and other requisite accommodation, with a small mortuary outside. There are four wards on the upper floor, matron's and nurses' bedrooms, and a bathroom.

FATAL ACCIDENT TO A SURGEON. — Mr. W. Ballinghall, Surgeon, Bean-street, Hull, on attempting, on Tuesday evening, to get out of a tram-car in which he was riding towards home, accidentally slipped and fell upon his head. He apparently suffered from internal injury, and was taken home in a semi-conscious state. Medical aid was immediately obtained, but he never rallied, and died at noon on the following day.

ROYAL COLLEGE OF PHYSICIANS.—On the 27th ult. the President of the Royal College of Physicians, Sir Andrew Clark, received a large and distinguished company in the hall of the College. An interesting collection of works of art and curiosities was on view for the entertainment of visitors. Especially interesting to medical men, who of course formed the great majority of the gathering, was the diploma of Harvey, the discoverer of the theory of the circulation of the blood. It is from the University of Padua, and is dated April 25th, 1602. There were also a manuscript book in the handwriting of Jenner, a number of relics of Dr. Priestley, many autographs of medical celebrities, and some scientific exhibits. The band of the Royal Artillery, under the Cavaliere Zavertal, played a selection of popular music during the evening.

PROPOSED CHILDREN'S HOSPITAL AT LEICESTER.—Hitherto Leicester has been without any proper provision for the treatment of children in hospital. A few beds have been available for accidents and urgent cases in the general wards of the infirmary, but lately attention has been drawn to the urgent need for something more than this, and the present Mayor, Mr. Thos. Wright, has taken up the matter with much spirit. Under his auspices an open-air fancy dress ball and fête was arranged, and held on the 28th prox. (Coronation Day) in the Abbey Park, which, thanks to fine weather, was a great success, more than £800 being taken for tickets. His worship, at a luncheon given by him on the same day, was able to announce that, in response to an invitation for subscriptions which he had sent out, a sum of between £4000 and £5000 had already been promised. It is estimated that about £7000 will be required to build and furnish the new hospital, which it is proposed to erect in connexion with the infirmary on part of the spare ground available there. On this question of site, however, some little difference of opinion exists, many advocating that the new hospital should be built on higher ground, and not on the low-lying site of the present infirmary.

THE NEW ST. MARYLEBONE INFIRMARY, NOTTING HILL.—The fourth anniversary of the opening of the training-school in connexion with this infirmary was held in the Home on June 25th. The probationers, who are about to finish their year's training, having been subjected to a written and *vivâ-voce* examination by Mr. Lunn, F.R.C.S. Ed., the medical superintendent of the infirmary, and Mr. Croft, F.R.C.S., of St. Thomas's Hospital, Mr. Boulnois, J.P., chairman of the infirmary Visiting Committee, and Mr. Bonham Carter, secretary of the Nightingale Fund, addressed the meeting. The school appears to be making most satisfactory progress, and, independently of supplying the infirmary with highly-trained nurses, is drafting them into other institutions. The Home is built on the most approved plan; it is liberally supplied with baths, &c., and each probationer has a separate bedroom. Lectures and classes are carried on in the large class-rooms of the Home. Probationers are bound to the Infirmary Committee for three years, having passed through their year of training. Those who are drafted on to the infirmary staff receive a salary commencing at £20 and rising to £25 per annum, with uniform and washing. Having finished their first and second year of service satisfactorily, they receive in addition from the committee of the Nightingale Fund a gratuity of £2 for the first and also for the second year of service, a letter of approval accompanying each gratuity.

ST. GEORGE'S HOSPITAL.—At the meeting of the Weekly Board of Governors, held on Wednesday, the 27th ult., a resolution of thanks, engrossed on vellum, was presented by the chairman, Mr. Charles Hawkins, to Mr. R. T. Poole Collyns, the resident medical officer of Atkinson Morley's Convalescent Hospital, Wimbledon, who is about resigning his office, which he has held for twelve years, to commence practice in Wimbledon. The resolution was to the following effect: "The Weekly Board, on the occasion of the resignation of Mr. R. T. Poole Collyns, of the offices of resident medical officer and master of Atkinson Morley's Convalescent Hospital, beg to tender to Mr. Collyns their hearty thanks for the mode in which he has performed all the duties of the offices he has held for twelve years. Beyond the satisfactory treatment of the patients under his care, which has met with the approbation of the visiting medical officers, Mr. Collyns has exhibited a great power of administration by the tact with which he has carried out all the details of the internal working of the hospital, and the good discipline he has maintained. His constant supervision of all works that were necessary, within as well as without the hospital, whether as to the buildings, gardens, or grounds, has resulted in an economical expenditure of the funds. The Weekly Board feel that much of the present satisfactory position of the hospital is due to the energy and devotion in the performance of his duties ever exhibited by Mr. Collyns."

THE LONDON HOSPITAL.—A public meeting was held at the Bow and Bromley Institute on the 26th ult., under the presidency of Mr. Childers, M.P., to consider the excellent work done by the London Hospital amongst the crowded population of the East-end, and to invite the residents and working men of the district to assist the management in their endeavours to maintain the present efficiency of the hospital by means of clubs and subscriptions. The hospital has received a donation of £2000 from the Goldsmiths' Company, and £210 from the Fishmongers' Company.

MEDICAL NOTES IN PARLIAMENT.

Royal Barracks, Dublin.

IN the House of Lords on the 2nd inst., Earl Beauchamp moved that an humble address be presented to Her Majesty thanking Her Majesty for laying before Parliament the report on the prevalence of enteric fever in the Royal Barracks, Dublin, and praying Her Majesty to give directions that the recommendations contained therein may be carried out.—Lord Harris said that he would consult Sir T. Crawford on the subject. It was hardly necessary for the noble earl to move the latter part of his motion, because the Government were endeavouring to carry out as quickly as possible the recommendations made in the report.—Lord Herschell said that when this subject was before their lordships on the last occasion the condition of Richmond Barracks was also referred to. There could be no doubt that the amount of sickness at the Richmond Barracks was much greater than it ought to have been, and he should like to know whether anything had been done in the matter.—Lord Harris promised to make inquiries. After some further remarks from Earl Beauchamp, the Duke of Cambridge said he thought that some allowance should be made for the difficulties experienced in carrying out the recommendations made in the report. Every endeavour had been made, and was being made, to meet those difficulties and to give effect to the recommendations. They had to dispose of the garrison, and only short notice had been given of the arrangements; but he could assure the noble earl that the subject was receiving every consideration. It was intended to build new cavalry barracks, but that was a matter of time; and meanwhile the garrison must be kept up.

The motion was then withdrawn.

Pharmacy Act (Ireland), 1875, Amendment Bill.

On the 3rd inst., this Bill was read a third time.

The Pollution of Rivers.

In the House of Commons on the 29th ult., on the consideration of the Local Government Bill, on Clause 16, which empowers the County Council in addition to any other authority to enforce the Rivers Pollution Act, 1876, Mr. Brunner moved an amendment with a view to provide for the appointment of a joint committee of the counties through which any river flows to enforce the Act; but the Attorney-General opposed the amendment, pointing out that the clause merely gave a concurrent jurisdiction to enforce the Act. Sir W. Barttelot and Sir Lyon Playfair, however, strongly supported the amendment, but in the end it was withdrawn on Mr. Ritchie promising to bring up a new clause to carry out its object. The clause was then agreed to.

"Denatured" Tea.

On the 2nd inst., the Chancellor of the Exchequer, replying to Mr. Dixon-Hartland, said that the resolutions authorising the removal of "denatured" tea from bond for the manufacture of caffeine would be issued in a few days.

Evidence of Medical Men.

On the 2nd inst., in reply to Dr. Tanner, Mr. Matthews said that a medical man was paid a guinea for attending to give evidence in a coroner's court. The allowance to medical witnesses for attending as witnesses in a London police-court varies from 10*s.* 6*d.* to 21*s.*, according to the distance travelled. It was certified by the magistrate and paid by the Receiver of Police.

The Vaccination Officer of the Mile-end Union.

On Thursday, in reply to a question by Mr. W. Maclaren respecting a resolution of the Mile-end guardians in reference to certain charges brought against their vaccination officer, Mr. Ritchie said it was not usual in these cases to order an inquiry; but, in deference to the views which the guardians had expressed, and in consideration of the gravity of the charges, he had determined to institute the inquiry asked for.

Telegrams.

Mr. W. A. Macdonald asked the Postmaster-General whether titles, which it is often inconvenient to omit in telegraphing, consisting of two letters, such as P.P., C.C., M.D., M.P., &c., may not in future be counted as one word, in the same way as the letters indicating the postal districts of London are counted at present.—The Postmaster-General: I regret that I am not prepared to adopt the honourable member's suggestion. The effect would be to reduce the receipts from telegraph business, and, as a loss is already incurred on that business, I do not consider that I should be justified in taking any steps which would tend to increase the loss.

Anti-vaccination.

Mr. Picton asked the President of the Local Government Board whether his attention had been called to the case of Mr. M. H. Neab, of Kenfield, Sussex, who has been sixteen times summoned for refusal on conscientious grounds to have his children vaccinated? Whether the total fines inflicted, with costs, have amounted to £16 14*s.*? And whether the Local Government Board has any means of urging or enforcing the advice given in the letter to the Evesham Guardians?—Mr. Ritchie said that the defendant in question has three children; he has been summoned sixteen times and fined on eight occasions. The fines and costs amounted to £12 1*s.*, and not £16 14*s.* Mr. Neab had declared that no power on earth would ever force him to surrender what he felt to be the course of duty to his family. The Local Government Board had distinctly intimated to boards of guardians their views as to the course to be pursued where persons persisted in their refusal to comply with this law. But it was for the guardians themselves to determine what course they should take in individual cases.—Mr. Picton: Does not the right hon. gentleman think it desirable to introduce some legislation to prevent prosecution degenerating into persecution?—Mr. Ritchie: The administration of the Act is committed to an elective tribunal which must exercise its own discretion.

Insanitary Condition of Emigrant Ships.

In the debate in Committee of Supply on the vote of £69,000 for the Board of Trade and subordinate departments, Dr. Tanner called attention to the very inadequate inspection of emigrant ships by the sanitary inspectors of the Board of Trade, and insisted on better sanitary accommodation for steerage passengers on transatlantic liners. The hospital accommodation on board these vessels, he said, was often misappropriated to other purposes.—Sir Michael Hicks-Beach said the officers of the Board of Trade had no power to deal with the passenger ships; but with regard to the emigrant ships he would do his best to secure better inspection.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column are invited to forward it to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week for publication in the next number.*

ARMITAGE, W. H., L.R.C.P.Edin., L.F.P.S. and L.M.Glasg., has been appointed Medical Officer of Health for the Darwen Union District, Lancashire.

BARTON, S. J., M.B., T.C.D. and M.Ch., L.M. Dub., has been appointed Honorary Physician to the Norfolk and Norwich Hospital, vice Eade, resigned.

BEARBLOCK, W. J., M.R.C.S., L.R.C.P., has been appointed Assistant House-Surgeon to the Royal Albert Hospital, Devonport.

BEVERLEY, M., M.D.Edin., M.R.C.S., L.S.A., has been appointed Honorary Surgeon to the Norfolk and Norwich Hospital, vice Crosse, resigned.

BOND, F. T., M.D.Lond., M.B., A.B., M.R.C.S., has been reappointed Medical Officer of Health for Gloucester Combined District.

BURD, G. V., L.R.C.P.Edin. and L.M., M.R.C.S., has been reappointed Medical Officer of the Fifth and Sixth Districts, Okehampton Union.

COLLINS, W. J., M.S., F.R.C.S., has been elected to the office of Surgeon to the London Temperance Hospital, Hampstead-road, N.W., vacant by the resignation of Mr. A. Pearce Gould, M.S., F.R.C.S.

CURRAN, J. J., L.R.C.P.Edin., L.R.C.S.I., has been appointed Medical Officer of the Sick Fund Society of the Cork and Youghal section of the Great Southern and Western Railway Company, Ireland.

DANIELL, E. P., M.R.C.S., L.R.C.P., has been appointed Resident Surgical Assistant, for six months, to the Wolverhampton General Hospital.

GALLOWAY, W., L.R.C.P.Edin. and L.M., L.R.C.S.Edin., has been appointed Medical Officer for the Birtley Sub-district, Chester-le-Street, Durham.

MAKINS, G. H., L.R.C.P.Lond., F.R.C.S., L.S.A., has been appointed Surgeon to the In-patients, Evelina Hospital, Southwark-bridge-road, S.E., vice C. J. Symonds, resigned.

MOORE, J. W., M.R.C.S., has been appointed Medical Officer of Health, Newton Heath, Manchester, vice Gornall, resigned.

MOORES, S. GUISE, L.R.C.P.Lond., M.R.C.S., has been appointed Assistant House-Surgeon to the South Devon and East Cornwall Hospital, Plymouth, vice P. H. Whiston, resigned.

ROBINSON, T., M.R.C.S., L.R.C.P.Lond., has been appointed Assistant House-Surgeon to the Sheffield General Infirmary, vice P. Priestley, resigned.

SMITH, JAMES W., L.R.C.P.Lond., M.R.C.S., has been appointed Medical Officer for Doncaster West District Union.

STEER, WILLIAM, M.R.C.S., L.S.A., has been appointed Medical Superintendent of the Fulham Workhouse Infirmary.

STOCK, F. K., has been appointed Analyst for the Borough of West Hartlepool.

TARGETT, J. H., M.B., F.R.C.S.Eng., has been appointed Surgeon to the Out-patients, Evelina Hospital for Sick Children, Southwark-bridge-road, S.E., vice G. H. Makins.

WILLIAMS, F. N., L.S.A., has been appointed Medical Officer to the Fourth Division of the Brentford Union.

Vacancies.

In compliance with the desire of numerous subscribers, it has been decided to resume the publication under this head of brief particulars of the various Vacancies which are announced in our advertising columns. For further information regarding each vacancy reference should be made to the advertisement.

BELGRAVE HOSPITAL FOR CHILDREN, 79, Gloucester-street, S.W.—Surgeon to out-patients.

BRISTOL GENERAL HOSPITAL.—Assistant Surgeon.

CENTRAL LONDON OPHTHALMIC HOSPITAL, Gray's-inn-road, W.C.—House-Surgeon. Board and rooms.

CHELSEA HOSPITAL FOR WOMEN, Fulham-road, London, S.W.—Three Clinical Assistants. The fee is 5 guineas for a period of three months.

CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST, Victoria-park, E.—Assistant Physician; Resident Clinical Assistant; and Pathologist. Salary 100 guineas per annum for the latter appointment.

CUMBERLAND INFIRMARY, Carlisle.—House-Surgeon. Salary £70 per annum and pupil's fee. Assistant House-Surgeon. Salary £40 per annum and pupil's fee. Board, lodging, and washing provided in each case.

GENERAL INFIRMARY, Northampton.—Assistant House-Surgeon. Salary £80 per annum, with furnished apartments, board, attendance, and washing.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Brompton.—House-Physician.

HOSPITAL FOR WOMEN, Soho-square, London. — House-Physician. Salary £75 per annum, with board, &c.

ST. MARY'S HOSPITAL, London, W.—Surgical Registrar. Salary £50 per annum.

THE QUEEN'S HOSPITAL, Birmingham.—Resident Physician, tenable for two years. Salary £50 per annum, with board, lodging, &c.

WESTERN GENERAL DISPENSARY, Marylebone-road, N.W.—Honorary Surgeonships.

WESTMINSTER GENERAL DISPENSARY, Gerrard-street, Soho, London, W.—Honorary Physician.

Births, Marriages, and Deaths.

BIRTHS.

HAYWARD.—On the 26th ult., at Brixham, S. Devon, the wife of Arthur E. Hayward, M.R.C.S., &c., of a daughter.

HEAD.—On the 30th ult., at Heavitree, Exeter, the wife of Dewar Head, M.R.C.S., of a daughter.

HODGES.—On the 27th ult., at Guildhall-street, Bury St. Edmunds, the wife of James Hodges, M.R.C.S., L.S.A., A.K.C., of a son.

ROBERTS.—On the 19th ult., at Milton-under-Wychwood, the wife of Henry Roberts, M.D., M.R.C.S., L.R.C.P. Lond., of a daughter (prematurely).

TAIT.—On the 30th ult., at Hornsey-rise, the wife of Henry Brower Tait, F.R.C.S., of a daughter.

WATSON.—On the 29th ult., at Heigham Hall, Norwich, the wife of Charles J. Watson, M.R.C.S., of a son.

WHITTLE.—On the 4th inst., at 65, Dyke-road, Brighton, the wife of Ed. Geo. Whittle, M.D.Lond., F.R.C.S.Eng., of a son.

MARRIAGES.

ARMSTRONG—RITCHIE.—On the 26th ult., at Christ Church, Lancaster-gate, Henry Armstrong, Surgeon, Indian Medical Service, Madras, to Lily, daughter of the late S. Ritchie, Esq., and Mrs. Ritchie, Sussex-gardens.

BOGLE—MAIN.—On the 3rd inst., at Bebington Parish Church, by the Rev. C. P. Ford, Vicar of Godley, assisted by the Rev. Canon Feilden, Rector, James Linton Bogle, M.B., of Victoria West, Cape Colony, to Mary Strang, daughter of William Main, M.D., of New Ferry-park, Birkenhead.

FIELDEN—INCE.—On the 30th ult., at Croydon, William Eckett Fielden, M.D.Lond., of Burlington-street, Chesterfield, to Lillie Louise, daughter of William Ince, Esq., of Sutton House, South Croydon.

KIDD—CROZIER.—On the 28th ult., in the First Presbyterian Church, Newry, Frederic William Kidd, M.D., of Lower Fitzwilliam-street, Dublin, to Annie Armstrong, eldest daughter of the Rev. John A. Crozier, of Newry.

STOWERS—SHEPHERD.—On the 28th ult., at the Church of St. John the Evangelist, Red Lion-square, James Herbert Stowers, M.D., fourth son of Nowell Stowers, Esq., of Clapham-road, S.W., to Henrietta, youngest daughter of Edward Shepherd, Esq., of Bedale, Yorks.

DEATHS.

FOTHERGILL.—On the 28th ult., at his residence, 3, Henrietta-street, Cavendish-square, London, John Milner Fothergill, M.D., son of the late Dr. Fothergill, of Morland, Westmoreland, aged 47.

HARRINSON.—On the 26th ult., at his residence, Bardsey, Bath-road, Reading, Isaac Harrinson, F.R.C.S.Eng., in his 79th year.

M'CULLOCH.—On the 25th ult., at Dumfries, James Murray M'Culloch, M.D. Edin., aged 83.

RICHARDSON.—On the 28th ult., at Balham, John Richardson, M.D., aged 71.

N.B.—A fee of 5s. is charged for the Insertion of Notices of Births, Marriages, and Deaths.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, July 5th, 1888.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb.	Wet Bulb.	Solar Radia in Vacuo.	Maximum Temp. Shade.	Min. Temp	Rainfall.	Remarks at 8.30 A.M.
June 29	29·57	W.	61	55	111	70	55	·15	Cloudy
,, 30	29·68	N.	57	53	106	66	52	·13	Cloudy
July 1	30·03	N.	59	51	111	69	48	..	Bright
,, 2	30·02	S.W.	59	55	74	61	54	..	Overcast
,, 3	29·58	N.W.	61	57	119	72	56	·40	Cloudy
,, 4	29·53	S.W.	60	57	114	68	54	·10	Cloudy
,, 5	29·50	S.W.	62	57	113	68	55	·10	Cloudy

Notes, Short Comments, & Answers to Correspondents.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

All communications relating to the editorial business of the journal must be addressed "To the Editors."

Lectures, original articles, and reports should be written on one side only of the paper.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed to the Sub-Editor.

Letters relating to the publication, sale, and advertising departments of THE LANCET *to be addressed "to the Publisher."*

We cannot undertake to return MSS. not used.

TRAINING OF DEAF-MUTES.—ARE PATIENTS ABLE TO SPEAK DISTINCTLY?

Mr. J. J. Harding (Ballincollig).—The question cannot be answered collectively, because there is a very great difference in results. Some of this class, naturally the most intelligent, may be taught to speak distinctly; but the majority of these, although classed as deaf-mutes, have only lost their hearing a variable time after birth, and have in consequence lost the power of speech. Such children, although practically deaf-mutes, are not congenital cases, and sometimes quickly regain what they have lost. Probably a very small proportion, indeed, of the truly congenital deaf-mutes ever learn to speak distinctly. The whole subject is in the hands of a Royal Commission upon the Education of the Blind and Deaf and Dumb, which has been sitting for the last year or two, but has not yet issued a full report.

Ignorans.—1. Keetley's Guide to the Medical Profession, published by Baillière, Tindall, and Cox, King William-street, may be of use.—2. The Secretary of the Prison Department of the Home Office.

Mr. Patrick (Manchester).—It is well to adhere to the custom which has heretofore been followed in the locality.

Strenue.—There is nothing impossible in the "feat."

THE WARDELL CONVALESCENT HOME.

To the Editors of THE LANCET.

SIRS,—Will you kindly allow me to avail myself of your journal for the purpose of inviting medical gentlemen and others likely to be interested in my Home for Convalescents from Scarlet Fever at Stanmore to pay it a visit on Saturday afternoon, July 14th. The Home is undergoing cleaning, whitewashing, re-painting, and colouring, and the committee have thought it a favourable occasion for holding a meeting in a tent in the grounds, and giving the subscribers and others an opportunity of seeing the Home before it again becomes filled with patients. The meeting is fixed for 4.30 P.M.; Sir J. Risdon Bennett will preside, and anyone presenting his card or the card of invitation I am now issuing will be admitted. The nearest stations are Edgware on the G.N.R. and Elstree on the Midland Railway; but the Home is only ten miles distant from the Marble Arch by road.—Yours faithfully,

Stanley-gardens, N.W., July 4th, 1888. MARY WARDELL.

PHALLUS IMPUDICUS.

To the Editors of THE LANCET.

SIRS,—Can any of your readers kindly give me their experience with regard to the effects of the offensive odour from the fungus called "Phallus impudicus" in producing sore-throats similar to those caused by bad drainage? I am, Sirs, faithfully yours,

Bexley, July 3rd, 1888. T. WHEELER.

MICRO-ORGANISMS IN THE STOMACHS OF INFANTS.

DR. M. D. VAN PUTEREN, who has been engaged in examining the micro-organisms in the stomachs of infants in St. Petersburg, finds that during the first two months of life the microbes existing in the stomach are very various, no single form being constant. Their presence must therefore be merely accidental. The number of microbes in the stomach is always in direct proportion to that of those existing in the mouth at the same time; consequently, by means of a micro-biological examination of the mouth, the condition of the stomach may be pretty accurately inferred. It is evident, therefore, that the way to prevent the access of micro-organisms into the stomach is to exclude them from the mouth. It must also be remembered that the stomach in such young infants, containing much less acid than it does in older persons, presents a decidedly favourable field for the development and multiplication of micro-organisms. Dr. van Puterens' investigations are described in detail in the *Vrach*, Nos. 21, 22, 1888.

W. H. P.—The book is entitled "Treatise on the Physical Cause of the Death of Christ, and its relation to the Principles and Practice of Christianity. By William Stroud, M.D. London: Hamilton, Adams, and Co. Second edition. 1871." Dr. Stroud was an Edinburgh graduate (1819), and after years of good work in connexion with the Northern Dispensary of London he retired to devote himself to Biblical studies until his death at Highgate, June 29th, 1858. Sir J. Y. Simpson had the highest opinion of the treatise, and endorsed its conclusion that "the immediate cause of His dissolution was rupture of the heart and the escape of His life-blood from the central cistern of the circulation."

THE USES OF ANTIFEBRIN.

To the Editors of THE LANCET.

SIRS,—This is a drug which, I am convinced, is not sufficiently appreciated by the profession; therefore I feel no compunction in directing attention to this very useful and safe drug—in this latter respect in direct contrast to antipyrin. Antifebrin is cheaper and safer than antipyrin. The temperature is reduced quickly by antifebrin, and the duration of its effects lasts many hours, and frequently is permanent. It is usually administered by myself in ten-grain doses suspended in water (cold); it has no bad taste or smell. In the cases below mentioned there were no bad after effects, no malaise. About nine months since I administered this drug in a case of enteric fever. Although the temperature was very considerably reduced, I could not say that the result was satisfactory. In a case of acute rheumatism with this drug I certainly saved my patient's life; instant relief was given, and despite the appearance of cardiac symptoms the case was carried through to a most successful issue, and the heart affection disappeared. In chronic rheumatism antifebrin is most useful. Patients have frequently obtained immediate relief. One person to whom I administered this drug was relieved within two minutes, although racked with pain before. The powders never failed to have a speedy and good effect. In tonsillitis, in almost any stage, I have seen immense relief given by this drug. In several cases where deglutition was performed with the utmost difficulty the relief has been speedy and permanent. J. H——, almost choking, had two powders, one night and morning. After the first great relief was obtained, and after the second he was, as he said, all right. W. A——, a great sufferer from quinsy, was in a similar predicament. He was treated in a similar manner, and the same effect was produced. J. G—— was a similar case, and the same result was obtained. J. S——, with catarrh and pharyngitis, was almost immediately relieved by this drug. In erysipelas I have found antifebrin very useful. In colds with increase of temperature and in sore-throat this drug is invaluable; and in rheumatism and tonsillitis (in any stage) there is nothing to equal it. When salicylate of soda fails, antifebrin relieves and cures. It is also useful in sciatica. I shall try it in pneumonia. Of course, this drug must not be given haphazard, although I have not observed any ill effects from its administration. I think fifteen grains too large a dose.

I am not aware that antifebrin has been prescribed in acute or chronic rheumatism, tonsillitis, sciatica, or erysipelas by any physicians or general practitioners but myself. If my opinion is incorrect, I shall be glad to hear their experiences.—I am, Sirs, yours faithfully,

Maryport, June 21st, 1888. W. H. SPURGIN.

AUSTRALIAN JUVENILE GIANTS.

AN interesting family, consisting of Clara, aged fourteen, who weighs 28 st.; Tom, ten years, 13 st.; and Anna, eight years, 12 st., are now on view at the Royal Aquarium. The health of the three children is fairly good, and they are far more pleasant to look upon than the ordinary "fat women" usually exhibited as specimens of over-development of adipose tissue. The father and mother are decidedly lean in appearance, as also are two daughters, aged respectively seventeen and twelve, who accompany the exhibition. It is stated that the diet of all the members is the same both in quantity and quality. About the age and weight of the children there can be no doubt.

Scotia.—1. Lumley's Medical Officers' Manual is the only book necessary.—2. All printed forms are found by the guardians.

Mr. C. Rogers.—Simonilla and Dora di Ila might perhaps be obtained from Mr. Christy.

HOSPITAL ABUSE IN BELGIUM.

A CORRESPONDENT of *Le Scalpel* complains that every day more than a hundred persons in comfortable circumstances obtain advice, medicine, and dressings at the hospitals in Brussels and its suburbs; and he instances, amongst other flagrant cases with which he is acquainted, one of a rich hotel-keeper who attended the hospital of St. Jean daily to have ulcers on his legs dressed, and another of a well-to-do farmer who came constantly to Dr. Crocq's clinic in his carriage, which waited for him at the hospital door! In this way, he says, the Brussels hospitals take away the incomes of at least ten medical men, and at the same time rob their own resources in a most unwarrantable manner. In order to remedy this state of things he suggests that every applicant for hospital relief *pro deo* shall be compelled to produce a certificate of poverty. The editor of *Le Scalpel* fully agrees with his correspondent on the subject of the abuse of hospitals, and mentions that it is just the same in Liège, where there are two large hospitals which afford gratuitous attendance, including medicines and the performance of minor operations, to all comers; and that it is a common custom for people who have doubts as to whether their ordinary medical attendant is treating them properly to go to the hospital for a second (gratuitous) opinion, instead of asking for a consultation with the professor; also that numbers of well-to-do people dress themselves in shabby clothes and mingle with the poor in order to obtain gratuitous advice.

Veritas might with advantage apply to the hon. secretary of the Medical Defence Union, Dr. Leslie Phillips, 393, Moseley-road, Birmingham.

Dr. H. J. Hardwicke's paper is marked for insertion.

"IS ECZEMA CONTAGIOUS?"

To the Editors of THE LANCET.

SIRS,—I have just had the pleasure of reading the letter of Dr. A. S. Myrtle on the subject of the contagiousness of eczema, in this week's issue of THE LANCET. I have not the advantage of having perused the correspondence which has brought forth Dr. Myrtle's letter, but I find sufficient of the context of his correspondent's letter quoted to enable me to grasp the point at issue between them.

If I may be allowed to put the question in a different form, I would not ask "Is eczema contagious?" but would formulate my proposition thus: "Where does scabies end and eczema begin?" I have had opportunities of observing the course and incidence of both scabies and eczema in several of our English workhouses whilst acting as assistant to the respective medical officers of these institutions. Notably to my recollection at the present moment occurs the Helmsley Workhouse, Yorkshire, in the working of which institution I had the pleasure of assisting Dr. R. Bruce Low, now of the Local Government Board. My observation in the incidence of scabies and eczema was this: that a robust tramp comes into the workhouse, and on examination by the medical officer he is found to be suffering from scabies; isolation and treatment with either sulphur ointment or sulphide of lime results in a perfect cure in a day or two. *Per contra*, a poor widow with several children, tramping from a distant manufacturing town, who have been exposed not only to the lowering influences of insufficient food and other privations, but also to depressing mental influences, come into the workhouse after an accidental exposure to the infection of scabies. Subjected to the course that we would have found most efficacious in the treatment of the robust tramp, we find that instead of the rapid cure we have to contend all winter with a pseudo-eczema cum scabei, not only defying treatment by sulphur ointment or solution of sulphide of lime, but seemingly aggravated by them. My contention is that a patient exposed to the infection of scabies, and in a lowered condition from whatever cause, having once contracted the disease, is extremely liable to develop chronic eczema during the treatment to which a patient suffering from scabies is generally subjected. I can quite conceive that a patient in this condition of health having contracted the disease is peculiarly well fitted to furnish a favourable site for the development of the eggs of the acari, and the consequent irritation leads by short steps to eczema. Such at any rate is my experience. Certainly if there was any chance of re-infection, a stray female acarus, seeking whom she might devour, would find a favourable nidus in the subjects whose cases I have indicated.

I am writing on this subject purely from the general practitioner point of view, but I feel convinced that some of our consultants in the department of skin diseases will bear me out in what I have ventured to adduce in support of my views.—I am, Sirs, yours truly,

Farnworth, June 30th, 1888. J. A. MACKENZIE, M.B.

To the Editors of THE LANCET.

SIRS,—The reply to be given to the above question would appear to be simple enough, and is this: Some cases are, others are not, contagious. The direct causation of the latter kind is a germ, and this germ has not in the first place the power to produce a specific disease; but, being placed under varied and at the same time suitable surroundings, assumes a definite character, and then exerts its sway. May it not be that the epidemic of pneumonia, which is at present prevalent in the neighbouring town of Middlesbrough, had such a starting point? Given a harmless microbe planted on a favourable soil—e.g., a marsh with cold, damp, east winds—typhoid pneumonia breaks out. If we do not accept this proposition of contagiousness, how else can we account for the following facts? I have seen children inoculated with eczema from a vaccine vesicle on the eighth day. These results were by no means mere coincidences. Culture experiments, however, are needed to clear up this point. For this very reason I maintain that all vaccinations should be performed from fresh calf lymph. What public vaccinator ever inquires into the life-history of a family for a hundred years, nay, fifty, or even for one year. He is totally ignorant as to whether the infant's father or mother may not have some skin disease. Moreover, I am informed by an eminent veterinary surgeon that eczema and syphilis are quite unknown in the calf. I am sure of another point—namely, that vaccination, at all times efficacious in the modification of small-pox from calf lymph, will often cure a case of eczema. Over and over again have I noticed and performed this. The spore from the vaccine vesicle kills outright its opponent, or so alters it as to render it utterly useless, or change its character entirely. The fittest survives. Lastly, who has not seen an eczema of the upper lip produced by an ozæna? Is this not sufficient evidence of the contagiousness of certain kinds of this vesicular disease? In conclusion, let me remark that another variety is dependent on a nervous cause—neurotic; still another on the blood—sanguineous; and so on, all of which are non-contagious. For practical purposes, however, a far better classification would be into "those which are beneath the covered parts of the body and those which affect the unclothed." There is much vanity in the world, and medical men cannot afford to scoff at it.—Yours faithfully,

Stokesley, July 2nd, 1888. J. A. WETHERELL, M.B.

To the Editors of THE LANCET.

SIRS,—In THE LANCET of June 23rd you published a clinical note of mine relating to several cases of eczema occurring in the same family, which apparently spread by contact. In your last week's issue Dr. Myrtle asks whether they were cases of eczema or cases of scabies. I did not look for the acarus scabiei, but I feel convinced that I had to deal with simple eczema, for the following reasons: (1) Although I looked very carefully I could see no cuniculi; (2) the amount of irritation was not nearly so much as in itch; (3) large excoriated surfaces were formed much more rapidly than is the case in scabies; (4) the localities of the body usually affected by scabies were in most of my cases free from eruption. According to Dr. Liveing, "scabies is never found on the scalp and face in adults, and in infants only occasionally." In my cases the father had patches of eczema on the face and nowhere else, all the children had it more or less on the face, and two or three had it also on the scalp. (5) All my cases improved rapidly under a treatment in which (besides arsenic &c. internally) a soothing ointment of zinc and vaseline was the only external application used. No parasiticides whatever were applied. Yours faithfully,

Penge, S.E., June, 1888. EDWARD A. OPIE.

Inquirens.—A long extract of the communication of Drs. Finlay and Delgado to the Cuban Academy of Sciences concerning Yellow Fever and the "tetragens" connected with it is published in the *Revista de Ciencias Medicas*, No. 38 (Habana, May 20th, 1888).

"AURAL REFLEXES."

To the Editors of THE LANCET.

SIRS,—In connexion with the letter of Mr. Albert E. Kynaston, in your issue of to-day, describing a case of reflex vomiting from irritation of the auditory canal, perhaps the following case may be of interest. Two days ago I removed a polypus from the right ear of a lady who had suffered from disease of the middle ear when a child, with loss of the tympanic membrane. The canal was almost entirely blocked up by the polypus, but I managed to get a few drops of a 5 per cent. solution of cocaine into the ear and removed the polypus, without the lady complaining of any pain or discomfort; but on touching the root, from which the polypus had been removed, with nitric acid she complained of sharp pain, and on syringing the ear with warm water she manifested symptoms of syncope, and was violently sick. These symptoms ceased in a few minutes, and she had no further trouble.—Yours truly,

Ipswich, June 30th, 1888. JAS. NORMAN VOGAN.

Mr. C. P. Bahin.—We cannot assist our correspondent further than by recommending him to consult the Charities Digest, published by Longmans.

Juventus.—The letter has been mislaid. Will our correspondent kindly repeat his question?

AN ANTISEPTIC FOR MIDWIVES.

To the Editors of THE LANCET.

SIRS,—In your issue of June 23rd "Dispensary Surgeon" asks what is the best antiseptic to put into the hands of midwives. I think he will find the silico-fluoride of sodium, which is commonly sold under the name of "Salufer" to be both safe and efficient. It presents the following advantages. It is cheap, inodorous, non-irritating in a solution of one grain to an ounce of water, non-poisonous, does not stain or alter in any way the hands or linen, and it can be conveniently carried in the form of compressed discs or powders in amount sufficient to make a quart of solution. I have proved its efficiency as an antiseptic in a large number of surgical cases, such as herniæ, abdominal sections, amputations, &c., and have the evidence of several obstetricians as to its efficacy as a vaginal and uterine douche. Messrs. Reynolds and Branson of Leeds have supplied me with the compressed discs.—Yours truly,

Leeds, June 26th, 1888. A. W. MAYO ROBSON.

ERRATUM.—In Mr. F. Marsh's paper, published last week, p. 1291, fifth line from bottom, for "mark" read *mask*.

COMMUNICATIONS not noticed in our present number will receive attention in our next.

COMMUNICATIONS, LETTERS, &c., have been received from—Dr. Niven, Oldham; Dr. Robertson, Newcastle-on-Tyne; Mr. Garstang; Mr. T. Laffan, Cashel; Dr. R. Park, Glasgow; Mr. W. Hewett, Sittingbourne; Mr. Wu[illegible]rlich, London; Mr. Somers-Smith; Mr. Sandiland; Mr. G. T. Trewman, Portsmouth; Dr. Ringwood, Kells; Mr. Mayo Robson, Leeds; Mr. J. A. Gough, London; Messrs. Debenham and Co., London; Mr. E. S. Sugden, Birkenhead; Messrs. Caldwell and Son, Dublin; Mr. Wheeler, Bexley; Mr. J. B. Johnstone; Mrs. Ashton Warner, London; Mr. W. H. Thomas, Maesteg; Messrs. Pryce and Whitelegge, Nottingham; Mr. Sanderson, Glasgow; Dr. Castle, New York; Mr. Taylor, Richmond; Dr. Rose, London; Messrs. Truax and Co., Chicago; Dr. Wetherell, Stokesley; Messrs. Burgoyne and Co., London; Rev. Dr. Roberts, Hackney; Messrs. Macmillan and Co., London; Dr. Woodhead, Edinburgh; Mr. Lynd, Bournemouth; Dr. McMordie, Belfast; Dr. W. Pasteur, London; Dr. Macgregor, Hawick; Dr. McVail, Kilmarnock; Mr. Klugh, London; Mr. Gillies, Brockley; Dr. Permewan, Liverpool; Dr. Tripe, London; Dr. Lillie, Farnworth; Mr. H. W. White, London; Dr. J. A. Mackenzie, Farnworth; Mr. Pentland, Edinburgh; Dr. Wolf Smith; Dr. Naismith, Ayr; Mr. C. H. Byers, London; Mr. Vogan, Ipswich; Mr. Charlton, Jarrow; Dr. A. E. Garrod, London; Mr. Sell, London; Mr. Wolff, London; Dr. Benthall, London; Mr. Lawley, London; Mr. Diggens, Lancaster; Dr. Adam, West Malling; Dr. Allwright, Maidenhead; Messrs. Stern, London; Mr. C. L. Todd, London; Mr. Gellenschaft, Wien; Mr. Allan, Liverpool; Dr. Walker, Southport; Mr. Tunmer, Harrogate; Mr. Watt, London; Mr. Elliott, Carlisle; Messrs. Beal and Sons, Brighton; Mr. Birchall, Liverpool; Messrs. Robertson and Scott, Edinburgh; Mr. Hulme, Birmingham; Messrs. Orridge and Co., London; Dr. Dowding, Suffolk; Mr. Collins; Dr. Tennant, Ben Rhydding; Mr. Whitford, London; Mr. Browne, London; Mr. Draper, London; Mr. Foulerton, Chatham; Chirurgus, Leeds; Clericus; H.; Scotia; J. P.; Veritas; Anxious, Llandilo; Geddes Manufacturing Co., London; Strenue; Beta, Wakefield; L. M. S., London; An Inmate; H., London; Matron, Bristol Royal Infirmary; R. M. B., London; Matron, Stockport.

LETTERS, *each with enclosure*, are also acknowledged from—Mr. Cook, Cirencester; Mr. Popman, London; Dr. Fountain, London; Dr. Day, London; Mr. Petherick, Norfolk; Mr. Head, Exeter; Dr. Thompson, Totnes; Dr. Emerson, Biggleswade; Mr. French, Dublin; Dr. Bell, co. Down; Mr. Lee Good, Norwich; Mr. Lee, Leeds; Miss Garlick, Leeds; Dr. Dunn, Preston; Mr. Kelvin, Manchester; Mr. Williams, Monmouth; Mr. Ritchie, Oxley; Mr. Harvey, London; Mr. Murray, Halifax; Mr. Bayes, Wellingboro'; Mr. Juler, London; Mr. Ralph, Burton-on-Trent; Messrs. Spickett, Pontypridd; Messrs. Hooper and Co., London; Mr. Heywood, Manchester; Messrs. Reynolds and Branson, Leeds; Mr. Grier, Hirwain; Dr. Smith, Dumfries; Dr. Boyle, Redcar; Dr. Sutton, Queensland; Mr. Johnson, Leicester; Mr. Essex, Pontypool; Mr. Linker, Lymington; Mr. Wormald; Mr. Appleton, Cornwall; Mr. Walker, Southport; M.D., London; Radius, London; A. B. C., London; Bristol Royal Infirmary; G. T., Bath; Sternum, London; Spes, London; Surgeon, Bristol; S. P., London; Appenzel, London; E. B., London; M. S., Southport; Vendor, London; M.B., London; Alpha, Manchester; Rectus, London; M. L., London; A. B., London; M.D., Bristol; L. M., London; L. J. C., London; Horton Infirmary; B. Y., London; C. S. H., Tufnell-park; X. Y. Z., Clevedon; Medicus, Wilton; Mirror, London; W. E. G., London; B.Sc., London; X. Y. Z., London; Medicus, Hatcham; Sudor, London.

Burton Chronicle, Reading Mercury, Hertfordshire Mercury, Herald and Weekly Free Press, Scottish Leader, Surrey Advertiser, Windsor and Eton Express, East Essex and Halstead Times, Townsville Daily Bulletin (Sydney), Manchester Courier, &c., have been received.

Medical Diary for the ensuing Week.

Monday, July 9.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10.30 A.M., and each day at the same hour.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1.30 P.M., and each day at the same hour.
CHELSEA HOSPITAL FOR WOMEN.—Operations, 2.30 P.M.; Thursday, 2.30.
ST. MARK'S HOSPITAL.—Operations, 2 P.M.; Tuesday, 2.30 P.M.
HOSPITAL FOR WOMEN, SOHO-SQUARE.—Operations, 2 P.M., and on Thursday at the same hour.
METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.
ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.
CENTRAL LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M., and each day in the week at the same hour.

Tuesday, July 10

GUY'S HOSPITAL.—Operations, 1.30 P.M., and on Friday at the same hour. Ophthalmic Operations on Monday at 1.30 and Thursday at 2 P.M.
ST. THOMAS'S HOSPITAL.—Ophthalmic Operations, 4 P.M.; Friday, 2 P.M.
CANCER HOSPITAL, BROMPTON.—Operations, 2.30 P.M.; Saturday, 2.30 P.M.
WESTMINSTER HOSPITAL.—Operations, 2 P.M.
WEST LONDON HOSPITAL.—Operations, 2.30 P.M.
ST. MARY'S HOSPITAL.—Operations, 1.30 P.M. Consultations, Monday, 2.30 P.M. Skin Department, Monday and Thursday, 9.30 A.M.

Wednesday, July 11.

NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 10 A.M.
MIDDLESEX HOSPITAL.—Operations, 1 P.M.
ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1.30 P.M.; Saturday, same hour. Ophthalmic Operations, Tuesday and Thursday, 1.30 P.M. Surgical Consultations, Thursday, 1.30 P.M.
ST. THOMAS'S HOSPITAL.—Operations, 1.30 P.M.; Saturday, same hour.
LONDON HOSPITAL.—Operations, 2 P.M.; Thursday & Saturday, same hour.
GREAT NORTHERN CENTRAL HOSPITAL.—Operations, 2 P.M.
SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Operations, 2.30 P.M.
UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M.; Saturday, 2 P.M. Skin Department, 1.45 P.M.; Saturday, 9.15 A.M.
ROYAL FREE HOSPITAL.—Operations, 2 P.M., and on Saturday.
KING'S COLLEGE HOSPITAL.—Operations, 3 to 4 P.M.; Friday, 2 P.M.; Saturday, 1 P.M.
CHILDREN'S HOSPITAL, GREAT ORMOND-STREET.—Operations, 9 A.M.; Saturday, same hour.
COLLEGE OF STATE MEDICINE (Theatre of the Chemical Society, Burlington House).—4 P.M. Sir J. Crichton Browne: Responsibility and Disease.

Thursday, July 12.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M. Ophthalmic Operations, Friday, 1.30 P.M.
CHARING-CROSS HOSPITAL.—Operations, 2 P.M.
SANITARY INSTITUTE OF GREAT BRITAIN (Lecture Theatre of the Royal Institution, Albemarle-street, W.)—3 P.M. Anniversary Meeting (Mr. Edwin Chadwick in the chair). Dr. B. W. Richardson: The Storage of Life as a Sanitary Study. The medals and certificates awarded to the successful exhibitors at the Exhibition held at Bolton in 1887 will be presented.

Friday, July 13.

ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.

Saturday, July 14.

MIDDLESEX HOSPITAL.—Operations, 2 P.M.

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